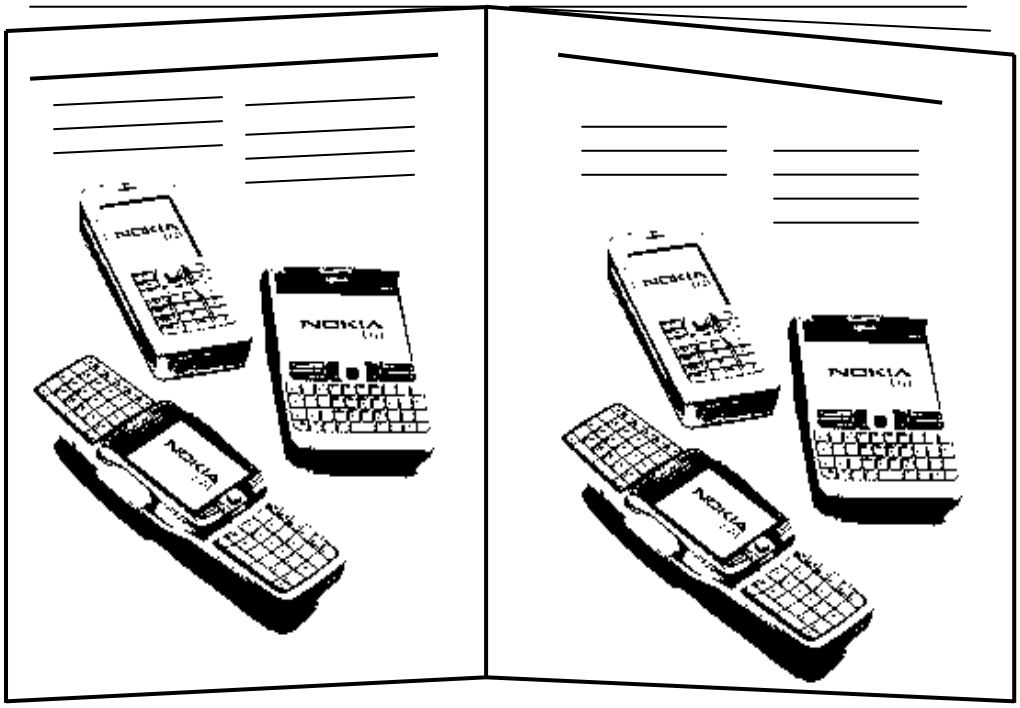
The Information Society reflected in journalistic media

A study of how Norwegian and South African newspapers cover 3G related issues



Erlend Krogstad

Master thesis
Faculty of Humanities
Department of Media and Communication
University of Oslo
Autumn 2006

Abstract
This master thesis seeks to assess how journalistic media mirror important features related to the Information Society. Many theories are devoted to explore the impact a changing technological environment has on journalism in terms of working routines and distribution channels. Few, however, has focused on how journalistic content mirrors the rapidly changing technological environment in contemporary societies.

The main discussion in this thesis is based on examples of how issues relating to the development -and implementation of the third mobile network (3G) have been covered in newspapers in two different counties, namely Norway and South Africa. Altogether 341 articles, all of which are related to 3G, from eleven different newspapers have been analysed and discussed according to their specific contextual environment. The main findings can be listed in a threefold conclusion: Firstly, that newspaper coverage of 3G is highly dominated by economical perspectives. Secondly, that the persons, companies and institutions appearing in newspaper reports on 3G are almost exclusively subjects with economical interests in this technology. And thirdly, that newspapers neglect many important aspects when covering issues related to the Information Society and might contribute to reinforce exciting inequalities in contemporary societies.

Acknowledgements

My greatest respect to my three supervisors; Helge Rønning, Kristin Skare Orgeret and Anders Fagerjord. I highly appreciate your advices and encouragements the past two years.

I also wish to thank all colleagues and friends at the University of KwaZulu Natal for making my stay in South Africa a memory for life. Elva, Diedre, Reggie and Zwakele, I all regard you as great friends and wish to thank you for including me in your social circles while staying in Durban.

To all my fellow students at IMK: Thank you for crating the most stimulating social environment during the past three years!

I also wish to thank all my friends and especially my family for showing great patience during my student years.

An ultimately, my sincerest thanks goes to my partner Karoline for her endless support and great friendship.

CONTENTS

Chapter one: Introduction

> About 210 journalists from all over the world was gathered in an old storage house in Berlin Tuesday. Together with market analysts, partners and a selection of customers, Nokia had invited to a presentation of new technology, visions and products for the future. The Finns had built a small conference centre in the great hall.
>
> With new and improved models in the multimedia-series, "Nseries", Nokia wish to conquer important market shares from the digital camera- and video camera manufacturers. […] Speculations about what news Nokia would present in Berlin has been many, but both the most qualified, and picture-leaks ahead, indicated photo/video-phones. (Aftenposten online edition, April 26th 2006 14:30)[1]

The press conference described above was arranged by Nokia[2]. According to Aftenposten's journalist in Berlin, Klaus Børringbo, were there over 210 journalists from all over the world present on this PR-event. Nokia further supplemented this press conference with numerous press releases the same day.[3] The overall purpose of this press conference was to launch three new handsets in the new Nokia 'Nseries', and these new mobile phones experienced a baptism ceremony like few other technological devices.

As the above mentioned example illustrates, the commercial forces in the information and communication technology (ICT) sector seem to possess the ability to generate considerable attention in journalistic media[4]. This industry and the development it represents have, according to several established theorists, changed the very structure of society the past few decades. One such theorist is Manuel Castells, who argue that ICT form the material basis for the global economy and says that:

> Toward the end of the second millennium of the Christian era several events of historical significance transformed he social landscape of human life. A technological revolution, centred around information technologies, began to reshape, at accelerated pace, the material basis of society. Economies throughout

[1] Translation from original Norwegian text: "Vel 210 journalister fra nesten hele verden var samlet i en gammel lagerbygning i Berlin tirsdag. Sammen med markedsanalytikere, samarbeidspartnere og et utvalg kunder, hadde Nokia invitert til presentasjon av ny teknologi, visjoner og produkter for fremtiden. Finnene hadde bygget opp en hel liten minimesse i den store hallen. Med nye og forbedrede modeller i multimediaserien, "Nseries", vil Nokia erobre viktige markedsandeler fra digitalkamera- og videokameraprodusentene. [...]Spekulasjonene om hva Nokia skulle presentere av nyheter i Berlin har vært mange, men både de mest kvalifiserte og bildelekkasjer i forkant indikerte foto/video-telefoner."

[2] Nokia is the world's largest mobile handset manufacturer and spent in 2003 and 2004 about 1 billion Euros annually on selling and marketing expenses (Nokia annual report 2003, Nokia annual report 2004).

[3] I registered six press releases from Nokia Norway and nine from Nokia Africa on the 25th of April 2006.

[4] By 'journalistic media' I refer to the term used by Brian McNair in The Sociology of Journalism (1998). Journalism is in this sense; "any authored text, in written, audio, or visual form, which claims to be (i.e. is presented to its audience as) a truthful statement about, or record of, some hitherto unknown (new) feature of the actual, social world." (1998:4). Journalistic media then becomes any media relying on content and journalist living up to these features.

> the world have become globally interdependent, introducing a new form of relationship between economy, state, and society, in a system of viable geometry. (Castells 2000:1)

The globally interdependent economy, which Castells mentions, has evolved as a result of the ICT revolution, and it is reshaping existing structures in society. Nevertheless, this global economy are for some experienced as a necessity, while others have no experience with it at all. Manuel Castells (2000, 1998) addresses this as an inclusion/exclusion problem of which the first and the third world are situated in different ends. He further stresses that societal participation in this global economy is depends on a well developed ICT infrastructure. Nevertheless, the forces that determine peoples use and access to ICTs are many and range from political organisations to educational institutions to corporate managing. Furthermore, the processes involved are often highly complex and involve many decision makers representing a multitude of interests.

ICTs are increasingly affecting people's everyday lives, as well as they facilitate larger structural changes in societies on a national and global level. As Castells notes, the decisive forces dominating in this development also possess the ability to transform societies. From a media perspective, it is interesting to explore how such processes are portrayed in journalistic media. Firstly, because journalistic media often watches power holders with scrutiny and, as Jo Bardoel argues, media creates a common orientation towards them (Bardoel 1999). And further, assessing how media mirrors the role of ICTs in society will also tell us something about what kind of general awareness media raises towards this significant part of contemporary societies.

When approaching this topic I have chosen to compare two societies characterised by very different dependency and relationship to ICTs: Norway and South Africa. The former is chosen because it represents an Information Society with a high density of information and communication technology. On the other hand, South Africa has been included to represent a society developing towards an Information Society, however characterised by a strong internal divide in terms of use and access to ICTs. These two countries are well suited for comparison because both closely follow the global development of ICTs, and both seek to adapt accordingly to this rapidly changing technological environment. And further, both countries also have large national commercial players involved in the international ICT sector.

One of the major new technologies launched for commercial purposes the past few years have been the third generation mobile network (3G). Over one hundred telecommunications companies worldwide have put their money and effort into this new mobile network technology, including the major players operating in Norway and South Africa. These two countries currently have two 3G networks each, launched within the same months and respectively by the major national telecom operators. I have therefore chosen to place the technological focus of this thesis specifically towards 3G, however, in combination with more general examples relating to development and use of ICTs in Norway and South Africa.

This thesis aims to map out the how ICTs form the basis of building Information Societies in Norway and South Africa, and then further analyse how this process is reflected in newspapers in both countries. The analysis will then form the basis for a discussion of how journalistic media in general deal with ICT issues as dominant features of the Information Society. Based these two aims the working title of this thesis is: *The Information Society reflected in journalistic media in Norway and South Africa– A study of how Norwegian and South African newspapers cover 3G related issues.* And the research question this thesis ultimately seeks to answer is: *What are newspaper's coverage of 3G telling us about the Information Society in Norway and South Africa?*

I will in this thesis draw on two distinct fields within the media- and communication studies. Firstly, this thesis embraces a discussion on how journalistic output is shaped by societal contexts, and therefore requires general theoretical perspectives on the relation between journalism and society. Theorists such as Brian McNair and Jo Bardoel will be central in this respect. Secondly, when dealing with the role of ICTs in societies, a brief assessment of theories related to technology- and society is needed. The views of theorists such as Leah Lievrouw and Manuel Castells, among others, will be central in this part of the thesis. These two theoretical approaches will then, together with the major findings from the newspaper analysis, form the basis of a discussion on the role of journalistic media as creators of common awareness towards prominent features in the Information Society.

The ‘Information Society’ is a frequently used term both by scholars and politicians, nevertheless, it’s a term which may be difficult to grasp and a comprehensive and explicit definition of what an Information Society is does not exist[5]. Still, Denis McQuail argues that:

> The idea of the information society is the most relevant and overarching framework for understanding and expressing different forces for change in contemporary societies. […] It has something to say about socio-technical as well as cultural change and has implications for all aspects of public communication […] (McQuail 2000:121)

McQuail further emphasizes that many societies have become dependant on electronic information networks and that great resources are spend on information and communication activities. Furthermore, the increasing flow of information - that has followed the development of ICTs - has also contributed to and understanding of the significance of information in contemporary economy and society (McQuail 2000:121). In this thesis the understanding of the term ‘Information Society’ is based on the above mentioned perspectives and the main focus is placed on the significance of information and communication technologies in contemporary societies. One must note, however, that this thesis does not seek to further clarify, or question, the understanding of what an Information Society is. Rather, in this thesis, the use of the term ‘Information Society’ has a descriptive function because it mirrors important characteristic features of contemporary societies, such as high density of ICTs and strong dependence on information and information technologies.

Existing media research on the relations between journalism and the Information Society has traditionally been focused on how ICTs have changed journalistic practices, routines and forms of distribution. This theoretical field has, however, not included many perspectives on how important issues in an Information Society are depicted in journalistic media content. The shortage of such perspectives has inspired this research together with this thesis’ relation to the larger research project: ‘*Convergence and divergence in the communication landscape – a comparative study between the Nordic region and South Africa’*.[6]

[5] Many theorists, such as Manuel Castells (2000), Frank Webster (2002) and Armand Mattelart (2003), question the term ‘Information Society’ because of inconsistencies in the use of the term and its inaccurate meaning of it, among many other reasons. I will pursue this discussion in the sixth chapter of this thesis.

[6] My thesis is written as a part of this lager project which is a common research project between the University of KwaZulu Natal in South Africa and the University of Oslo in Norway. The project deals with information – and communication technologies and content –and culture products and the geographical focus area defined by this project suits well the object pursued in this theses, and this North- South perspective has added a dimension to the discussion on how the Information Society is portrayed in journalistic media. When dealing with Information Society issues there are traditionally distinct differences between North and South in terms of technology use and dissemination. This is often described as the ‘digital divide’. Hence, pursuing the digital

In both Norway and South Africa the deployment of 3G gained significant attention in newspapers, and the 3G related articles from eleven newspapers will serve as a foundation for this thesis. There are six South African -and five Norwegian newspapers included in this study, and 341 articles from these newspapers have been analysed. The outcome of this analysis indicates that newspaper coverage of 3G has generally been focused on the economical aspects of this technology. Almost 80% of the articles analysed had a significant economical orientation towards 3G. In contrast, only 14% of the articles analysed had such a consumer oriented framework. The political and technology-specific perspectives on 3G were almost absent in the newspaper coverage of 3G in South Africa and Norway. One must on the basis of these findings also question whether journalistic media in South Africa and Norway - by mostly focusing and targeting the financial aspects of the ICT sector - are itself as an excluding force in the Information Society.

The findings from the newspaper analysis come with several nuances which will be extensively treated in chapter three. Perspectives on journalism in the Information Society and the sociology of journalism will be discussed in chapter four. Chapter five deals with the contextual elements related to access and use of ICTs in Norway and South Africa. Theories on ICT and society together with a general discussion on the findings of the newspaper analysis will be addressed in chapter six. Before moving on to the analysis, the methodological approach used in this thesis needs to be clarified.

divide perspective might prove fruitful in terms of assessing the role of journalism in the Information Society. Also, when assessing how journalistic media in the North and South mirrors this largely global development, it might contribute to assess different geographical orientations towards the Information Society. Thus forming a basis for discussing whether there are differences in terms of identification and inclusion in this global process.

Chapter two: methodology

This single research project is, as mentioned above, done as a contribution to a larger cross-national research project exploring the media landscape in the Nordic countries and Southern Africa. Before moving on its worth stressing that except from the overall comparative nature of this project, all the methodological approaches are chosen independently and according to the specific aims of this thesis.

The methodological approach to this study is based on a combination of both quantitative and qualitative analysis – a methodological triangulation – aiming to strengthen the final result of the research project. This project, however, is first and foremost a comparative study. In the following chapter each of these methodological principals will be elaborated and briefly discussed according to the challenges and problems related to them.

2.1 Limitations of cross-national comparative studies

"In the social sciences cross-national comparisons are both attacked as impossible and defended as necessary." (Livingstone 2003:478)

Sonja Livingstone points out that the impact of globalization has challenged the nation state as a unit suitable for doing research on. Globalization has in this respect further complicated comparative media studies because the flows information and culture are increasingly non-national (Livingstone 2003:479). Critics of the comparative research method further argue that it produces measurement out of context and often ends up with comparing other nations through a western lens (2003:482). These two main arguments against comparative research are contestable and needs further discussion.

Sonja Livingstone argues that if the meaning of any term or measure is explicitly analysed according to its own unique context, the purpose of making comparisons no longer exists (Livingstone 2003:482). In relation to the nation-as-unit criticism, she draws on Kohn (1989) and comments that comparative research can be viewed as useful through four different models. Firstly, comparisons can be used as a strategy for 'seeing better'; "[…] the aim [with

comparative studies] is idiographic, to understand particular countries for their own sake, comparison providing a useful means of determining what is distinctive about a country. […] In this sense, comparative research has rather modest aims" (Livingstone 2003:484) Secondly, one might approach comparative research with the aim of testing the universality of a phenomenon or a theory. Livingstone's view on this methodological approach is that it is quite modest in terms of assessing any complexity within a country (2003:484). Thirdly, an approach to comparative research can build on the second approach while adding a presentation of specificity of each country. This model seeks to map out the diversity of each country while integrating them into a common theoretical framework (which is considered transnational, or even universal) through a standardized methodology (2003:485). And finally, the last model presented in Livingstone (2003) is based on theories of cultural dependency, globalization and imperialism. The national context is here explained through external factors, such as global processes, rather than internal factors (2003:485).

The comparative model used here builds on the third model drawn by Livingstone and it is primarily seeking relations among dimensions of national variation. It favours a standardization of the methodological approach when exploring and assessing the diversity of the different research subjects. Furthermore, this model applies a common theoretical framework – which is merely focusing on internal systems, without transnational or global systemic explanations - to the findings and thus might also support theory-building. And in terms of contextualization, this model strongly favours providing accounts of the national and local specifics and variations related to the compared dimensions (Livingstone 2003:493).

2.1.1 Practical obstacles related to comparative research

Some argue that the standardization of the methodological approach in comparative research may remove national particularities. Nevertheless, some also argue that standardization works best when quantitative measurements are used, presupposed that objective and culture-free data are available. However, one must then also concede that the validity of the collected date may be questionable (Livingstone 2003:488-489). Through the process of gathering statistics and articles for analysis related to this research process, such challenges have occurred frequently. The first apparent obstacle in this research has been to overcome differences in available research tools and access to empirical material in the two countries. This practical

problem has faced me with a question of how reliable the archives from which the empirical material are collected.

Another significant practical problem with the comparative aspect of this study relates to the process of gathering newspaper articles. In the Norwegian case, *Atekst*[7] has provided me with all the articles from the Norwegian newspapers. Nevertheless, as Urszula Srebrowska (2005) points out, the reliability of this specific online archive can also be questioned. She points out that the numbers of articles available through *Atekst* slightly differ from the actual number of articles published in the printed publications[8]. This source of error must also be taken into consideration when drawing the analytical guidelines for this project.

The South African newspaper articles on the other hand, have been collected from each newspaper's own online archive. The quality of the search engines used in these archives has proven to be somewhat unreliable. Search results on the keyword '3G' has provided variable results in terms of numbers of articles matching this keyword. More specifically, the searches often resulted in '0' hits during daytime, and numerous hits during afternoon -and night time. This problem occurred in all of the South African newspapers and relates to the low data transfer capacity and small bandwidth in South African networks. Especially 'overseas' traffic is slow during daytime because of poor infrastructure and low capacity. To guarantee reliable search results, searches were done up to five times for each South African newspaper.

The rather limited information available through these online newspaper archives has also generated some modifications of the analysis. For instance, some South African newspaper archives provide information about which section of the paper the articles were located in. Other archives merely provide the text, headline and date. The variation in available information has then again enforced an analysis exclusively based on content, consequently excluding other external factors such as article location in the newspapers, authorship and the use of images.

[7] *Atekst* is a common online archive for some Norwegian publications. The archive includes 16 newspapers, five magazines and also texts from one news agency.

[8] This problem is relates to questions over copyright of the newspaper articles. An article published in a newspaper as a reprint of a news agency story will not appear in *Atekst* under that specific newspaper. Further, if an article is written by a freelance journalist the articles also sometimes are in the copyright of the freelancer, not the newspaper. Hence, the article will not appear in *Atekst* (Eriksen, Anders R. Norsk Medietidsskrift årg.12 nr 1 44-47). These possible 'errors' might generate weakened quality of those research projects that heavily rely on *Atekst* as a research tool.

In addition, few South African newspaper archives online separates articles published on print from articles published online. This factor might also limit the comparative aspect of this study because newspapers might have a different content mix policy in their online publications than print publications.

The selection of newspapers has also been somewhat affected by the financial means available for this project. The cost of accessing the online archives of two specific newspapers has inhibited research on them. One South African and one Norwegian newspaper, originally implemented in this study, were therefore excluded. In the Norwegian case, the newspaper was not easily replaced and the selection newspapers included in this study were consequently reduced to five rather than the initially six. In the South African case the newspaper excluded was more easily replaced.

The criticism towards cross-national comparative studies can when considering these practical problems seem well-suited. The research conditions in these two countries are very different, and many unforeseen obstacles have occurred during the research period. This might ultimately have had some affect on the outcome of the project.

2.1.2 The comparative analysis

The challenges and critiques related to comparative research are many. Nevertheless, Sonja Livingstone says that the comparative method might also be a fruitful approach in media studies. Following the third model described by Livingstone above, the aim with comparative approaches is to capture diversity within a common framework. This might seem difficult considering the vast differences between the two countries included in this study, both in terms of media landscape and demographical differences. The utilisation and dissemination of ICTs are quite different in these two countries, and they are also situated in different ends in terms of global standards. Nevertheless, the two nations face many of the same challenges in terms of divides based on geography, education, age, gender etc. And further, the launch of the 3G networks in Norway and South Africa has happened at the same time in Norway and South Africa (Telenor and Vodacom launched 3G networks in December 2004, and MTN and NetCom launched 3G in June 2005). Livingstone further argues that the comparative model challenges the researcher in what to compare and what to focus on in the comparative part of the study. According to Livingstone, when comparing media products in two different

countries one always has to pursue the aims through the identification of similarities and differences (Livingstone 2003:479).

> […] it may not seem exciting to seek out cross-national similarities, although it often seems 'safer'; differences, contrasts and surprises all make 'better' – rhetorically more engaging – stories. Partly the difficulty of balancing similarities and differences is inherent in the making of comparisons per se, but partly the difficulty lies in the nature of the particular units – nations – being compared […] (Livingstone 2003:479)

The differences between Norway and South Africa are quite significant and often relate to the traditional North -South divide. Differences in demographics, economy, political systems and wealth distribution will be considered as significant factors likely to impact on the outcome of this analysis. Still, to balance the analysis between difference and similarities might be challenging.

> Most simply, depending on the countries compared, findings will centre more on similarities or on differences. Hence, a research project which spans continents, comparing vastly different countries, may have difficulty identifying the fine-grain differences which research on similar countries reveal. Conversely, comparing similar countries, perhaps from the same geographical region, may miss the bigger picture of transnational differences. The lens one chooses to apply depends on the research question asked. (Livingstone 2003:487)

According to Livingstone, the quantitative part of comparative research often fails when it ends up with a 'comparison by consensus', because truly objective measures rarely are available (Livingstone 2003:489). Quantitative data, gathered from different sources, will naturally never be truly comparable because the methods and purposes of different sources vary. Comparative research that uses quantitative data to describe an empirical phenomenon also needs to concern the systemic contexts that shape these phenomena (Livingstone 2003:490).

2.2 Qualitative research based on grounded theory

The qualitative part of this research is founded on, however not exclusively, a constructionist grounded theory. Through this approach, theory is constructed out of data. It also acknowledges multiple ways of interpreting a specific set of data (Corbin & Holt 2005:49)

> In grounded theory, the discovery of concepts begins with the first interviews or observations. […] Concepts are identified from distinct events/incidents in the data, which may be actions and interactions, or meanings given to events or emotions that are expressed about certain events. This early coding sometime referred to as 'open coding' as the text is opened up and broken apart for intensive

> scrutiny. […] In grounded theory, concepts are derived from multiple sources of qualitative data. (Corbin & Holt 2005:50)

After collecting the 341 articles matching the keyword ‘3G’, a second phase followed, which included reading all articles while making notes of the specifics of each article. The whole reading and note-writing process was repeated three times and finally resulted in a code book based specifically on these notes. During this process concepts and trends were assessed and included in a scheme. This scheme contained a set of categories, with several subcategories, aimed to systematize the different features of the 3G coverage. Finally, this process resulted in an analytical tool - in the form of a scheme - that was later used to analyse each newspaper article (see scheme in Appendix one and two). In this sense, the practical approach to the analysis draws on the grounded theory approach. According to grounded theory the course of action in the research process is identified through four stages, often referred to as microanalysis.

Firstly, identification of relevant concepts involves interaction with the data and field notes are made answering the question of what the data is all about. Other questions include who or what is involved, where and when is it taking place? How is it expressed and what meanings are provided? “The idea is to identify as many properties and dimensions of a concept as possible. Properties and dimensions not only define concepts they give it specificity and differentiate it from other concepts.” (Corbin & Holt 2005:50)

Secondly, one move on to the next bit of data and compares it to the previous. Differences and similarities are noted and filled in to supplement the previous field notes. As one goes through more and more data, new dimensions and concepts are supplemented to the field notes (Corbin & Holt 2005:50).

The third step is the theory development. The set of data should here be both manageable and relevant to the study. The analyst then looks for commonalities between concepts and groups all different concepts into categories by making comparisons. Further, as Corbin & Holt describes;

> Once a researcher has grouped concepts into categories the data gathered earlier about each concept become part of properties and dimensions or what are now subcategories of a larger category. […] The data are then reduced further by synthesizing them under and even more abstract concept, the core category. (Corbin & Holt 2005:50)

Whereas the grounded theory would further demand the writing of memos[9] for the purpose of theory building, the purpose of my grounded theory approach was purely as means for further research. Ultimately, the part of this research which is based upon strategies of grounded theory has resulted in something far from the initial purpose of grounded theory. As Corbin & Holt writes; "Developing grounded theory is not for everyone. From onset one has to be very clear that developing theory, not a listing of themes or a description of a phenomenon, is the goal of the research." (Corbin & Holt 2005:51) In my case, the aim was not building theory but rather to build an analytical tool facilitating a standardized methodological approach to the comparative research.

2.2.1 Implications of the grounded theory approach

There are two distinct problems one need highlight when using the grounded theory approach. Firstly, grounded theory involves an assessment of concepts and categories which largely depends on the researcher's own ability to find the most essential features in the available data. Since this project is carried out by only one person, the likelihood of ignoring some elements during this process increases. Secondly, it is difficult to assess when the category saturation is reached.[10] This will also strongly depend on the researcher's own ability to interpret the data systematically and repeat the same questions for each of the data samples. Both implications relates strongly to individual skills and the level of experience of the researcher. Such unavoidable problems must, however, always be taken account for when interpreting research material.

2.3 Reliability and validity

In terms of the content analysis carried out in this thesis, some general challenges facing textual analysis must be noticed. Firstly, as mentioned in Østbye et al. (1997) the relationship between form and content is of great importance when analysing a media text (1997:55). In

[9] "Memos are written records of analyst's thoughts, interpretations and directions of self." (Corbin & Holt 2005:51)

[10] "Saturation denotes the point in the research process when no new concepts or further properties or dimensions of existing concepts emerge from data. Although some additional properties and dimensions may continue to be found, as a general rule, when the researcher reaches a point when the data seem repetitive, one might say saturation has occurred." (Corbin & Holt 2005:51)

this case the type of newspaper - tabloid, broadsheet, specialized, regional, national etc. – might also affect the content of the newspaper. As this study shows, *Dagbladet* – a Norwegian national daily tabloid – have a distinctly different approach to covering 3G issues than *Dagens Næringsliv*, which is a financial newspaper. Hence, a newspaper guide is included in this study in order to analyse content according to the contextual preferences.

Secondly, the content analysis performed in this thesis is also excluding any images that might have been published in relation to the articles. Because pictures, and other graphics, often contribute to the total impression of a newspaper article, one might criticise this analysis of newspaper articles for excluding image interpretation. In the case of this project however, none of the online archives provided images attached to the texts. Hence, the validity of the material analysed can be questioned.

In terms of reliability, the existing statistical figures gathered and used for purposes of contextualisation might be questionable. When gathering figures on mobile penetration and Internet access there are often several sources available and they often provide slightly different numbers. And further, because of rapidly developing markets, statistical figures on cell phone penetration and Internet access etc. are changing frequently. This factor has for instance forced me to exclude some large common databases, such as UNESCO's, and I have had rely on several smaller independent research projects and figures collected from various sources. For instance, in chapter three, I have referred to subscriber numbers provided by Vodacom (the largest South African mobile operator). These subscriber numbers, however, are based on the numbers of Vodacom SIM-cards in circulation, and may therefore be inaccurate in terms of providing information about cell phone penetration in South Africa. For instance, the 20 million subscriber base reported in May 2006 by Vodacom has not taken into consideration the possibility of one person owning more than one SIM-card. Hence, the reliability of figures might be questioned. Of course this is not a problem exclusively related to Vodacom, but rather something that appears with several of the sources of which this analysis depends on. Nevertheless, it is unlikely that these rather small inaccuracies will have any significant impact on the major results presented in this thesis.

2.4. Triangulation; combining qualitative and quantitative content analysis

The purpose for using methodological triangulation is to strengthen the validity of the qualitative research with quantitative measurements[11]. The analysis of the 341 newspaper articles was approached through a combination of a qualitative grounded theory approach and a quantitative content analysis. This quantitative approach to content analysis doesn't necessarily mean an exclusion of all qualitative virtues of the data. Rather, an inclusion of variables and categories absorbing possible qualitative virtues of the data is also possible when doing a quantitative content analysis (Østbye et al 1997:204). Nevertheless, there are some criticism directed towards this quantitative content analysis, as Østbye et al argues; "One might argue that by dividing the material [of which one are analysing] into several smaller units one might miss the larger picture – one might often argue strongly that the larger picture is different than the sum of the smaller single elements." (Østbye et al 1997:207) This again depends on the intention of the project. In the case of this study, a strict system was adopted and each newspaper article was qualitatively evaluated (using the analytical scheme mentioned above) and findings were quantified and placed according to the articles' origin (both in terms of nationality and type of newspaper).

2.5 Newspaper selection

There are 11 newspapers included in this study, five Norwegian and six South African. Each newspaper has been selected on the basis of having a mix of national, regional/local, tabloid, broadsheet and specialized newspapers[12]. Circulation numbers has also been a significant parameter in the selection of the newspapers in this analysis. The newspapers included in this study are:

Aftenposten (morning edition) is a daily national newspaper situated in Oslo. It is distributed every day, Monday to Sunday, and is the second largest newspaper in Norway with a daily circulation of 252 716 copies and a readership of 758 000 in 2005.

[11] By validity I refer to Østbye et al. (1997); the validity of the study depends on how well research design and operations provides relevant insight in respect to the main research questions (1997:100).

[12] Note that in South Africa there are eleven official languages, however almost 80% of the newspapers are in English. Seven newspapers are published in Afrikaans and only two newspapers are in Zulu. This has been a limiting factor in the selection process because only newspapers in English have been included here. There are additional 90 'knock-and-drop' newspapers. These newspapers are distributed in neighbourhoods only and are free of charge, only funded by advertising. Many of these newspapers are published in languages other than English and Afrikaans (South Africa Yearbook 2003/2004:148-150).

Bergens Tidene is a regional daily newspaper covering Bergen and the surrounding area. It is published from Monday to Sunday and is the largest regional newspaper In Norway with a daily circulation of 88 054 copies and a readership of 251 000 in 2005.

Dagbladet is the third largest national newspaper in Norway and the second largest tabloid newspaper. It publishes Monday to Sunday, is situated in Oslo and has a circulation of 162 069 copies and a readership of 780 000 in 2005.

Dagsavisen is a regional newspaper for Oslo and the surrounding area. It's a daily newspaper, Monday to Sunday, with a circulation of 33 830 copies and a readership of 142 000 in 2005.

Dagens Næringsliv is a newspaper covering business issues and the financial sector. It is the largest economically oriented newspaper in Norway, it is distributed nationally and has a circulation of 74 248 copies and a readership of 302 000 in 2005.

Business Day is a national economy oriented newspaper, however also issuing politics and current affairs. It's a daily paper with distribution from Monday to Friday and a circulation around 42 000 copies and a readership of 96 000 in 2005.

Business Report is the largest national daily economy oriented newspaper with a circulation around 293 000 copies and a readership of 650 000 in 2005. It's a daily paper and is distributed with four carrier titles: *Cape Times*, *The Mercury*, *The Star* and the *Pretoria News*.

Cape Argus/Weekend Argus is a regional newspaper for the Cape Town metropolitan area. It's a daily newspaper, Monday to Sunday, with a circulation around 76 000 copies on weekdays (and 107 000 on weekends) and a readership of 417 000 in 2005.

City Press is the fourth largest Sunday paper in South Africa and has 97% black readership. It's a national paper, but has over half of it's readership in the Gauteng province. It has a circulation of 173 000 copies and a readership of 1 848 000 in 2005.

The Mercury is a regional newspaper for the Durban metropolitan area. It's a daily newspaper, Monday to Friday, with a circulation of 41 000 copies and a readership of 241 000 in 2005. The newspaper is also a carrier for the *Business Report*.

Sunday Times is South Africa's largest newspaper with a circulation of 505 000 copies and a readership of 3 196 000 in 2005. It's a Sunday paper and distributed nationally.

2.6 Summary

This comparative study has been carried out using a combination of qualitative and quantitative methods. Obstacles have occurred in terms of assessing the point of saturation when following a grounded theory approach. Nevertheless, triangulation of methods has proved fruitful in the sense that qualitative and quantitative approaches complement each other. A combined approach has been especially fruitful in the analysis of the 341 articles because the quantification of the findings has resulted in an easily presentable analysis, and the qualitative approach to the data has brought the depth and details that constitute the specifics of each newspaper and each country. Drawing on these methodological principals, the analysis presented in the following chapter will form the core part of this thesis, namely, a presentation of the analysis of the 341 newspaper articles.

Chapter three: newspaper perspectives on 3G

The total number of articles gathered for this study is 341, of which 158 articles are collected from the Norwegian newspaper article archive *Atekst*[13]. Of the remaining 183 South African articles originate from the subjected newspapers own archives (available on web). Table 3.1 below shows the article breakdown, by country, into the four categories; business, consumer, political and technology (figures in parenthesis show the percent of total). Note that the most prominent difference between the two countries relates to the share of consumer oriented articles versus the share of business oriented articles[14].

Table 3.1 Number of articles according to category

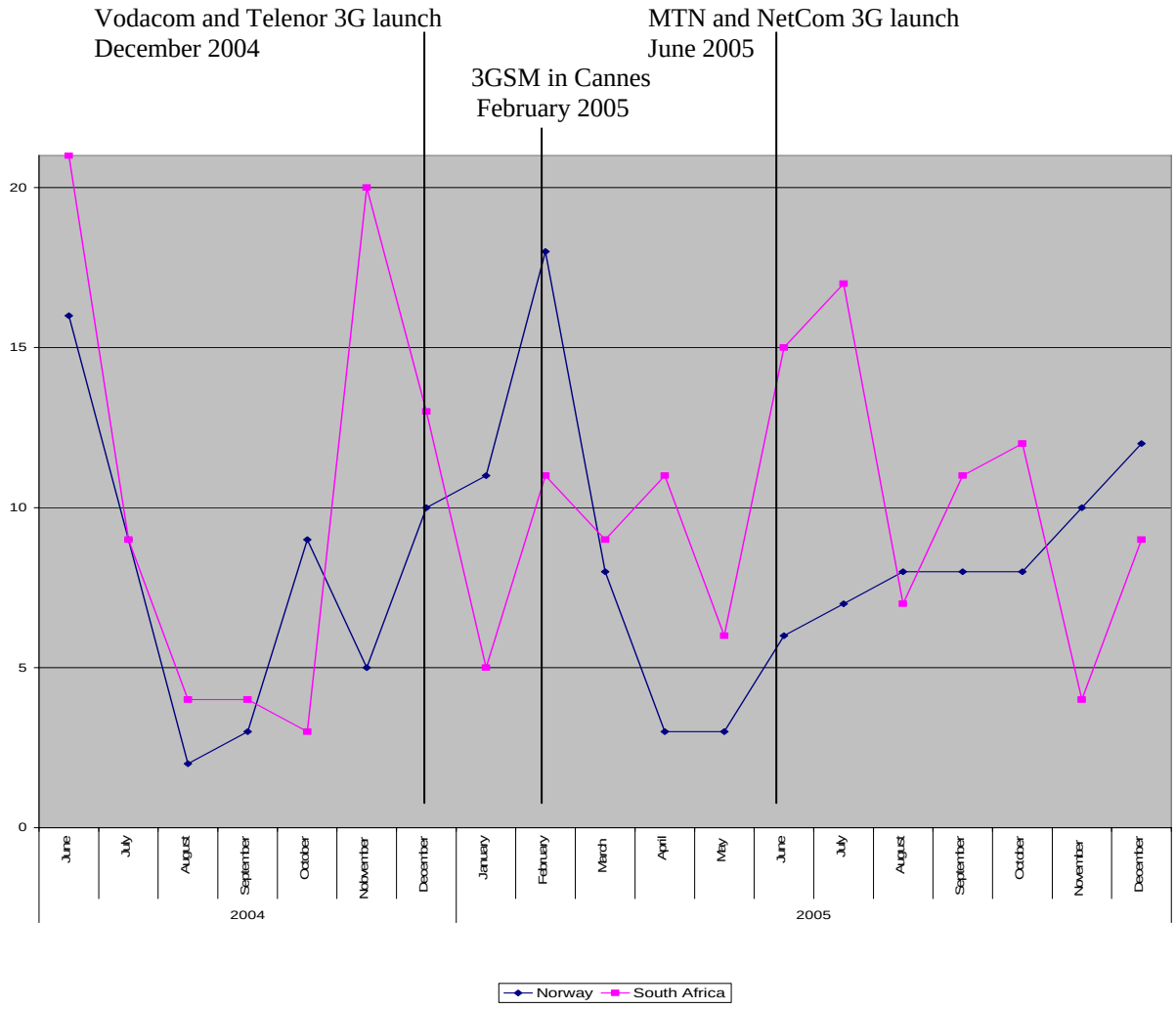
	Norway	South Africa
Business	109 (69%)	159 (87%)
Consumer	37 (23%)	12 (7%)
Political	2 (1%)	2 (1%)
Technology	10 (6%)	10 (5%)
Total number of articles	158	183

The average number of 3G related articles are 30.5 per newspaper in South Africa and, insignificantly higher, 31.5 per newspaper in Norway. These numbers are, however, somewhat misleading because the number of 3G related articles range between four and 86 in the South African newspapers, and form three to 64 in the Norwegian newspapers. In chart 3.2 below, the numbers of 3G articles are broken down by country and according to the months they were published.

[13] Note that there is five Norwegian and six South African newspapers included in this study. Two of the South African newspapers are also exclusively distributed on Sundays.

[14] Note that among the newspapers selected for this study, two business oriented newspapers are South African and only one is from Norway. This might make the differences between the two countries in business versus consumer reporting slightly less significant. For instance, if the *Business Report* was excluded from the study, the consumer share would increase 1% (to 8%) and the business share drop 1,5% (to 85,5%), further would the political perspective and technology perspective respectively change to 0,7% and 6,5%. So even if the newspaper segment would be more comparable, the differences between the two countries would not be significantly different.

Chart 3.2 Number of 3G related articles by country during the 19 months of research and three major 3G-events.



The Norwegian curve starts to climb in December 2004 when Telenor first launched their 3G services. The curve rises further in January 2005 and peaks during the 3GSM Worldcongress in Cannes in mid February 2005. The South African curve first peaks in June 2004. It then peaks again in the pre-3G-launch phase in late November 2004 (most South African 3G articles in November 2004 were published in the second half of the month). It again peaks in June/July 2005, the period when MTN launched its 3G services. However, one must note that both countries experienced a very high concentration of 3G articles in June 2004. This is in the Norwegian case mostly due to six short paragraphs published on the 22nd of June 2004, all of which were briefly mentioning 3G as business 'briefs'. The following part of this chapter will clarify some of the specific features characterizing business reporting on 3G issues.

3.1 Business oriented journalism in Norway and South Africa

This type of journalism is typically found in either separate business sections of broadsheet papers or in purely business papers, specialized newspapers. As shown in figure 3.1 a majority of the articles I have analysed in this study fall under this category. The total number of business oriented 3G articles number 268 items; or 79 percent of all the articles analysed. Of these 286 business oriented articles 179 were found in the three specialized business newspapers; *Business Day*, *Business Report* and *Dagens Næringsliv*. I will elaborate some of the main features that characterize business oriented 3G reporting in South Africa and Norway.

3.1.1 Who are visible in the business news?

Issues related to 3G can potentially take many forms and include several different parties when reported on. Within the business perspective approach to 3G reporting, the focus will naturally mostly be placed on different companies and actors within the telecom industry. My analysis confirms that the subjects of focus were in fact in 68.5 % of all the cases analysed major telecom players. When further breaking these figures down by country, some differences between Norway and South Africa are revealed; in 69 of the 109 Norwegian business oriented articles (63%) one or more of the major telecom companies played a significant role in the story. The figures for South Africa were 115 out of 159, almost ¾. These figures show that there were not significant differences between the two countries, but to some extent one can conclude that South African newspapers emphasise the big telecom player more than Norwegian newspapers.

In terms of who are cited as sources, the trend described above is confirmed; company sources were used in 129 South African articles and in 82 Norwegian articles[15]. These figures represent respectively 81 and 75 percent of the articles. In contrast, only six South African 3G reports cited political sources and seven Norwegian articles, respectively 3.8 % of the South African and 6.4 % of the Norwegian. This overwhelming emphasis on telecom company sources contributes to strengthen an impression that it is commercial aspects that drive the development of 3G technology.

[15] By company sources I have included all telecom companies and companies related to this sector. Telecom market analysis firms have also been included here.

The most subjected telecom companies in business oriented 3G reporting are all major players within the telecom industry. In both countries, the largest national operator was the most frequently mentioned company. Table 3.3 shows the frequency of telecom companies in the Norwegian news coverage of 3G issues.

Table 3.3 Telecom company representations in business oriented articles.

Norway		South Africa	
Company	Number of articles	Company	Number of articles
Telenor	37	Vodacom	80
NetCom	23	MTN	62
Chess	2	Cell C	19
Sense	2	Telkom	29
Tele2	1	Other South African	33
Other Norwegian	23	Nokia	24
Nokia	24	Samsung	14
Sony/Ericsson	24	SonyEricsson	16
Samsung	9	Motorola	16
Motorola	9	Siemens	10
LG	4	LG	3
Siemens	5	Vodafone	27
Vodafone	11	Other International	10
Other international	24		

The largest national telecom operator in Norway, Telenor, dominated the business oriented 3G covering and was mentioned in 37 articles (34%). NetCom, the second largest operator in Norway, was mentioned in 23 articles (21%). The three smaller Norwegian operators Chess, Sense and Tele2[16] seem - measured by representation in Norwegian newspapers - insignificant in relation to the development of 3G in Norway[17]. Other Norwegian telecom and telecom related companies were altogether mentioned in 23 articles (21%). In contrast to these figures, the representation of the major international telecom companies was more extensive. Both Nokia and Ericsson/SonyEricsson featured in 24 articles (22%) each and were the second most mentioned telecom companies related to 3G issues in Norwegian newspapers. As one can read out of figure 3.3, there is relatively extensive representation of the mobile handset producers. When comparing telecom company representation in Norway with South Africa, some distinct differences between the two countries newspapers come to light.

[16] Chess bought Sense in December 2004.
[17] One of the factors contributing to the low representation of Chess, Sense and Tele2 in 3G related articles is that none of these launched 3G services during the period of research, and only Chess has a 3G licence.

In South Africa Vodacom was mentioned in 80 articles and MTN in 62 articles. That is respectively 50% and 39%of all the business oriented 3G articles in the South African newspapers. Vodafone[18] and Nokia was the most frequently mentioned international telecom companies and featured respectively in 27 and 24 articles; which makes 17% and 15% of the total number of articles. Only 10 articles (six percent) included other international companies than those listed in figure 3.3. In contrast, the Norwegian coverage of other international telecom companies numbered 24, almost a quarter of the total number of articles. These differences may lead to a conclusion that the South African coverage of 3G is rather put in national context than international. In Norway the representation of international versus national is not as distinct as in South Africa.

One must bear in mind when reading these figures that this part of the thesis is limited to the business oriented journalism and only focuses on assessing the differences and similarities between the two countries. At this stage one might vaguely see some signs of how the two countries differ in terms of news culture. Both countries have a strong focus on business journalism, but Norwegian newspapers have far more consumer oriented content in relation to 3G than South African papers. Further, South African papers draw a picture of 3G as something mostly related to the large national telecom operators rather than international. The reader would more likely associate 3G to Vodacom and MTN rather than Nokia and Motorola. This picture is significantly different in Norwegian papers where the international telecom equipment and handset manufacturers experience far more coverage. I will in the next part of this chapter elaborate these differences when discussing the geographical context of reported 3G issues.

The focus on major telecom companies was, as mentioned above, quite significant. In contrast, focus on persons within the telecom industry was almost absent in the business oriented articles included in this study. A dominant focus on persons within the industry was only registered in 13 cases, of which 10 articles were Norwegian. All in all 9.1 percent of the Norwegian articles focused on the individual rather than the company in contrast to only 1.8 percent of the South African articles. Personification doesn't seem like a strategy of framing

[18] Vodafone owned 35% of Vodacom in 2004/2005 (they have now increased their share to 50%). The frequent appearance of 'Vodafone' in South African newspapers often comes as a result of this relationship.

business oriented issues in either of the countries; especially not the South African reporting. There is a clear tendency to focus on the institution rather than the individual.

3.1.2 Geographical proximity in business oriented 3G news

Technology issues are, as other news issues, to a certain degree covered according to the news value of the story. Following traditional news values, the geographical proximity of a story is an important factor that must be considered when 3G issues are written for a newspaper. This factor is also one governing 3G reporting. In the previous section I pointed out that international telecom companies feature more often in Norwegian 3G coverage than South African. As the figures below shows, South African 3G reporting is less influenced by international issues than Norwegian 3G reporting[19].

Table 3.4 Geographical proximity in 3G reporting

	Norway	South Africa
National	54%	75%
Regional	14%	5%
International	30%	20%
Local	2%	0%

Norwegian newspapers cover both more international issues related to 3G, as well as more regional issues[20]. Table 3.4 shows the main geographical context of the 3G stories, however, there are often overlapping geographical settings within one article. Table 3.5 explain further geographical references within the business oriented 3G reporting.

Table 3.5 Articles with secondary geographical references

	Norway	South Africa
National w/international ref.	44%	28%
National w/regional ref.	27%	30%
Regional w/domestic ref.	53%	75%
Regional w/international ref.	7%	75%
International w/domestic ref.	27%	15%
International w/regional ref.	21%	12%

[19] By regional I have defined Africa south of Sahara as regional in a South African perspective, and the Nordic countries as regional for Norway. International is then anything outside the national and the regional.
[20] Note that the two articles with a local setting are both from Bergens Tidene and none of them included any national, regional or international references.

Among the Norwegian newspapers 44 % of all the nationally framed articles also included some international references. In contrast, only 27 % of the South African articles with a dominating national context had international references. The trend is, however, the opposite in those articles originating from international issues. In contrast, the Norwegian newspapers are more frequently domesticating the international and regional as well as they internationalise the national.

A strong international and regional focus in the Norwegian newspapers might seem logical when considering Norway's position in the development of 3G. Norwegian 3G-licence holders has been slow compared to other Nordic countries in rolling out and developing the 3G network for commercial use. As mentioned in the previous chapter, Telenor launched the first 3G network in Norway in December 2004 followed by NetCom in June 2005. In contrast, the first Swedish 3G operator HI3G launched their network in May 2003, in Denmark HI3G opened its 3G network in October 2003 and in Finland TeliaSonera opened their 3G network commercially in October 2004 (3G Americas 2006). Ericsson's and Nokia's strong international position might also have contributed to position Norway as a country following in the shadow of our neighbours. According to IDC's *Information Society Index 2004* Norway was less developed and less adaptable to new information technology than the other Nordic countries. The development of 3G in Norway forms a good example in this case. Denmark (ranked number one on this index), Sweden (number two) and Finland (number seven) were all ahead of Norway in terms of launching their 3rd generation mobile network. Norway's 'weak' position in the Nordic context is also manifested in the 3G reporting in Norway. Norwegian coverage of 3G often 'looks' to the other Nordic countries, especially Sweden, to predict the trends and development of 3G services and handsets, and to compare prices within the Nordic domestic markets.

Another factor that might have contributed to the relative strong focus on regional issues in Norwegian newspapers is the ownership structure within the Nordic telecom market. Norway, Sweden, Denmark, and to some degree Finland, are moving towards one large telecom market. Within this market there are three large players with several national operations in each of the Nordic countries. Hence, the Norwegian business oriented 3G reporting will naturally focus on many common Nordic telecom issues.

A third factor that must be mentioned here is the role of Telenor, the former state owned Norwegian telecom company. Telenor has telecommunication operations in five (non-Nordic) European countries (four of which are located in Eastern Europe), in addition to operations in four Asian countries. This highly international operations portfolio might also have contributed to an international orientation in Norwegian 3G reporting.

South Africa, in contrast to Norway, experiences a continuous status as the most advanced country, in terms of ICT use and development, in its region (Africa). It is the largest telecom market on the African continent and is among top African countries in terms of use and development of ICTs. This is also reflected in the newspapers. Of those eight 3G articles with an African (regional) perspective, three quarter also included South African references. When reporting on non-national 3G issues, the international perspective is most likely dominating rather than the regional. A natural explanation for this is that there are very few 3G networks on the African continent. Consequently, South African newspapers will have to look towards other international sources for references when reporting on 3G in a non-national business perspective. And also, when newspapers are reporting on African issues, it is almost exclusively defined by the foreign operations of Vodacom and MTN[21], the two major South African telecom companies.

The above mentioned differences between Norway and South Africa might also indicate where the two countries find elements of identification in terms of developing as an Information Society. When Norwegian telecom companies are portrayed in a Nordic context - although often portrayed as slow and backwards - they are still associated with a region on the forefront of ICT development internationally. South Africa, on the other hand is, as a developing society, has not many regional issues to refer to in their business reporting (and if so, it's in ¾ of the cases as a consequence of some issues related to either Vodacom or MTN and their pan African operations). When focusing on non-national issues, South African business reporting rather refers to issues from Europe or Asia than African issues.

When summarising the above discussion and analysis of the geographical orientation in 3G newspapers reporting, some features appear as prominent; firstly, a significant share of the

[21] MTN has operations and co-operations in Swaziland, Mauritius, Nigeria, Rwanda, Ivory Coast, Cameroon, Uganda and Zambia. MTN also has ownership interest in Mascom and Iran Cell. Vodacom runs operations in South Africa, Tanzania, the Democratic Republic of the Congo, Lesotho and Mozambique.

South African newspapers put 3G issues in a national context rather than regional and international. The national context was also dominating the Norwegian 3G reporting. However, the regional and international perspectives were more prominent in Norwegian 3G reporting than in the South African. These differences can possibly be rooted in the social and economic differences between the two countries.

3.1.3 Events, themes and issues in business oriented 3G reporting

Within business oriented journalism the stories that are reported on will naturally in most cases have some connection to the business sector. An overall focus on business issues is therefore prominent in all the business oriented articles. Other 'bi-stories', however, are often included as second or third areas of focus. In order to assess the range of reported events, issues and stories related to 3G, table 3.6 might provide some useful information. Several of these events, issues and themes overlap each other within one article, and these categories do not represent the number of articles exclusively focused on one issue. For instance, an article can both deal with a consumer issue as well as bringing forward stock information. Nevertheless, in all business oriented articles the main perspectives are, one way or another, business oriented.

Table 3.6 Secondary events/issues/themes in percent of total business reporting

	Norway	South Africa
Consumer issue	17%	38%
Political issue	18%	11%
Technology issue	8%	9%
Financial results	10%	8%
Stock/market info	21%	14%
ICT exhibition	9%	3%
Cell phone release	7%	4%
3G service release	13%	27%
Digital divide issue	0%	8%

Table 3.6 show the dominating themes, issues and events in business oriented 3G reporting in South Africa and Norwegian newspapers[22]. Most 3G stories originate from one or more of these events, themes and issues. This overview provides an indication of what kind of themes, issues and events that's associated with 3G in business oriented newspaper reports. As table

[22] This categories are based on events, themes and issues that appeared in more than one newspaper article.

3.6 shows, there is a high frequency of consumer issues in the South African business oriented reports on 3G. Approximately 38 % of all the South African business oriented 3G articles featured some consumer issues. In contrast, only 17 % of the Norwegian articles included such consumer focus. This extensive focus on consumer issues in South African newspapers can largely be explained by a heavy focus on consumer issues in *Business Day*. Almost 50% of the 80 business oriented articles in *Business Day* included some consumer issues, which again counts for almost two thirds of the 60 South African articles containing consumer issues.

Consumer journalism is almost totally absent in the South African newspapers at large. In general this seems contradictory to the overwhelming focus on such issues in business oriented reporting. One must note, however, that these consumer issues were rarely introduced in the headline or the lead text, but took mostly form as supplement to the main issue reported. The rather considerable emphasis on new 3G services and other 3G related services in the South African newspapers corresponds well with these high numbers of consumer related topics. Overall, the focus on 3G services, the practical functions and cost levels are issues that frequently appear in business oriented 3G reporting in South Africa. This mix of consumer and business issues within business reporting differs from the Norwegian case where consumer and business reporting are separated in different newspaper types, articles and sections of newspapers.

There is also a noticeable difference in the emphasis on digital divide issues in 3G reporting in South Africa and Norway. Digital divide subject is totally absent in the Norwegian newspapers. In South African business oriented reporting digital divide issues were more prominent, however, almost exclusively reported on as a ‘bi-story’ or as the second subject. The digital divide issues brought up in relation to business oriented 3G reporting revolved mostly around the costliness of 3G services and cell phones versus the average income in South Africa. 3G was in this respect portrayed as a new service mostly for high income groups and medium to large enterprises. This distinct difference in 3G reporting in Norway and South Africa strengthens the assumption of a relationship between the contextual environment of the media and the media products.

Typical business oriented reporting are therefore often related to the economical performance of companies and nations, economic surveys, shifts market shares, etc. Among the business

oriented 3G reporting, shifts in market shares and stock market information was most frequently issued. Approximately 14% of the South African articles included information about shifts and other movements in the ICT market. The figures for the Norwegian articles were somewhat higher with 21%. Another frequent issue raised in business oriented reports on 3G were focused on ICT exhibitions and conferences. Ten Norwegian articles – totally nine percent of all the Norwegian business oriented articles - focused on stories that originated from such ICT exhibitions.[23] Furthermore, as Nokia's press conference from April 25th also indicates, press attendance doesn't fall short when a cellular mobile manufacturer releases news handsets. In eight Norwegian and six South African business oriented 3G articles, mobile phone releases played a central part of the reported story. It is worth pointing out that these press conferences, press releases and ICT exhibitions feed the press, and others, with highly processed information, allowing the ICT industry to 'show off'on their own premises.

3.1.4 Technological information in business reporting

The term '3G' is short for the 3rd generation mobile network. It's a term widely used by the telecom industry itself in commercials and press releases etc. and it's a term also absorbed by the press. As a word '3G' has no meaning without any supplementary information. According to Brian McNair (1998) the importance of balanced language in journalistic content is crucial. One might argue that using the term '3G' without further explanation will disrupt the communication process between the newspaper and the reader. Further, technological terms - such as '3G' and 'UMTS'- are not very informative to people who do not know them (especially in non-business newspapers, the word '3G' might potentially have an alienating effect on the readers).

Among the Norwegian newspapers 26 articles had '3G' in the headline; the same number – 26 - of South African articles also featured '3G' in the headline. [24] This respectively stands for 24 percent of the Norwegian 3G related articles and 16 % of the South African articles. This

[23] The 3GSM Worldcongress in Cannes, CeBIT in Hanover, and CommunicAsia in Singapore were reported on in a business oriented fashion in the Norwegian newspapers. In the South African newspapers the GSM in Africa conference in Cape Town, 3GSM in Cannes and Vodacom Techno Expo in Gauteng were the exhibitions reported on.

[24] 3G in headlines (number of articles); *Aftenposten*: 13(7 in *Pengene Dine* section and 6 in *Økonomi* section), *Dagens Næringsliv*: 7, *Dagbladet*: 5 (of which 2 were short paragraphs), *Dagsavisen*: 1, *Bergens Tidene*: 0, *Business Day*: 10, *City Press*: 9, *Business Report*: 4, *Cape Argus*: 2, *Sunday Times*:1 and *The Mercury*: 0.

relatively limited use of term '3G' might indicate two things. Firstly, those 3G issues reported on are often not the main issue in the articles. Rather, 3G is often mentioned in relation to, and as a consequence or contributing factor to other larger issues such as the reporting of financial results, etc. Secondly, the term '3G' might not be widely used in headlines simply because it might not make sense for the readers.[25]

In total, the South African newspapers published 52 business oriented articles containing background/ explanatory information about 3G. In other words, about every third South African business oriented article also provided some form of information about the technology and it's area of use. The figures for the Norwegian business oriented 3G articles are only 15 of 109 articles (14%)[26]. This distinct difference between the two countries' newspapers might mirror some of the differences between the two countries in terms of technology awareness. The density of information technology in the Norwegian society combined the readership profile might have generated in this result.

Table 3.7 further elaborates what kind of information that is provided about those practical features facilitated by the development of 3G.

Table 3.7 Percentage of total business reporting associating 3G with services and practical features.

	Norway	South Africa
TV/Video	15%	23%
News/weather/sports	5%	9%
Internet/e-mail	6%	31%
Videocall	3%	27%
Videoconference	1%	3%
Map	3%	1%
Gaming	4%	5%
Music	7%	11%
Banking	0%	2%

These features tell the newspaper reader something about what to expect from the new 3G network. In the South African business oriented journalism practical features related to3G are far more frequently issued than in Norwegian journalism. This further underpins the trend

[25] An example here could be *Dagbladet's* headlines on the 3G reports. Of those six articles explicitly devoted to 3G issues, only two mentioned '3G' in the headline. The focus rather lies on practical/ functional features related to 3G; broadband phones, multi phones, etc.
[26] The exact numbers are 13.8% of the Norwegian business oriented articles contained 3G explanations, and 32.7% of the South African business oriented articles contained 3G explanations.

described above. South African business journalism is more concentrated towards explaining and exemplifying the 3G technology, as well as they associates more it with practical functions.

In order to work out a system to separate this kind of perspective from other journalistic perspectives on 3G, I have drawn upon some features from the business oriented articles I have analysed. Firstly, in business reporting the parts of society presented are mainly linked to the business sectors and generally the economic fields; in my case the major telecom operators or cell phone manufacturers. In all the newspapers analysed in this study the sources cited and subjects of focus have been telecom companies.

Secondly, the framing of content in business reporting has also some distinct features about it. Put in a simplistic manner, business journalism is focused around business topics, often framed in a business perspective, directed towards the especially interested readers segment and is regularly found in separate papers or sections of new papers or in specialized newspapers.

In this study I have registered that the financially oriented newspapers have an approach to 3G based on traditional news values[27], in contrast to other broadsheet and tabloid newspapers. The high number of articles collected from financial newspapers also reflects this trend. Conclusively, one might say that 3G issues seems to be considered as more newsworthy in specialized papers than in traditional broadsheet and tabloid newspapers.

In my empirical material I have found some significant parallels in the newspaper coverage of 3G issues. One is directly related to the date of the 3G launch by the 3G operators and service providers in both South Africa and Norway (this has both covered in a business fashion and as a consumer event). Other 'events' that are covered by the business oriented newspapers are; major telecom actor's annual reports, ICT/comtech/telecom conferences and to some extent the release of new 3G handsets on the market. Other 3G-topics frequently appearing in business journalism are not directly related to 3G as such, but presented as consequences of 3G contracts within the industry, either stock market changes or employment cutbacks etc.

[27] By traditional news values I refer to McNair: proximity of time, -place -and culture, conflicts, deviation from the 'normal' and involving elites/celebrities/authorities (McNair 1998:77, 78).

In business journalism related to 3G there is also a tendency towards a corresponding coverage of 3G and the ownership-structure and landscape in the telecom sector in the two countries. A clear difference is noted here. The Norwegian business sector is very much oriented towards the telecom sector in the Nordic countries as one market. In contrast, South African business papers are more strictly focused on the South African market, and the major South African players within its own national boarders. I will elaborate this later in my analysis.

3.1.5 Summary

The similarities between the Norwegian and South African 3G coverage are perhaps more prominent than the differences. Nevertheless, the analysis of the Norwegian and the South African 3G coverage indicate that, when a detailed picture is drawn, some distinctions can be made. Firstly, there is a stronger national orientation in the South African newspapers than in Norway. This is also reflected in the strong international orientation in Norwegian newspapers. Secondly, although the themes, issues and events reported on are comparable, the South African business oriented journalism has a stronger focus on consumer related topics. Thirdly, technological explanation and practical functions of 3G are far more often issued in South Africa than in Norway.

3.2 Consumer journalism

As indicated earlier, another common way of framing issues concerning 3G is done with a consumer oriented perspective. Especially Norwegian newspapers have a significant amount of consumer oriented articles about 3G. In total 37 such articles identified in the Norwegian articles, which counts for almost a quarter of the total Norwegian 3G coverage. This kind of journalism is, however, more moderately represented in the South African newspapers. Only 12 consumer articles (7%) were identified among the South African 3G articles, significantly lower than the Norwegian case. One might draw from this that the high amount of consumer journalism found in Norway relates to the high level of technological development in the country.

An analysis of geographical focus in these consumer oriented 3G articles show that this specific way of reporting is highly concentrated on national issues. In Norway 34 consumer oriented articles (94%) had a national framework. Only two consumer articles had an international framework, and only one had a regional framework. Of the 12 South African consumer articles, ten (83%) had a national focus and two (17%) had an international focus. Except from this highly domestic orientation, a few other characteristics of consumer journalism on 3G are worth mentioning. Firstly the text is oriented towards the reader as a consumer, not primarily as citizen. Secondly, product -and service testing is a common topic in consumer journalism. Thirdly, the difference between editorial and journalistic work and pure sales information is often blurry in this kind of journalism. This is evident in the coverage of 3G found in *Dagbladet*, where 7 - of 20 articles related to 3G - were more or less pure sales information on 3G handsets. The information published in these articles, bearing no sign of journalistic or editorial filtering, were almost purely visually expressed, with a strong commercial orientation. *Dagbladet* were of course not the only newspaper with a strong commercial bias in their consumer journalism, rather, one can say that industrial influence are generally a quite prominent aspect of most consumer oriented articles on 3G.

As Egil Sundvor also agues (Sundvor 2000:145), Norwegian editorial offices in general lack prioritization of consumer journalism because of the high cost of doing such journalistic work. In addition, Sundvor says, consumer journalism is often not considered within the profession to be proper journalistic material. This can then again lead consumer journalism into the blurry area between advertisement and editorial texts, as some of the 3G coverage in *Dagbladet* appears as.

Furthermore, there is a problematic relationship between consumer journalism and advertising. Journalistic media reporting on 3G issues often comes with great commercial potential in regards to advertising. As John McManus says the media firm competes in markets for both advertisers and consumers (McManus quoted in Tumber et al 1999:189). McManus argues that in the print media the displacement of ‘useful’ information is less severe than in TV. There is more room for adding entertainment in addition to informative stories. Income from advertising rises according to the circulation among potential customers, and a newspaper can, in McManus’ view, add advertisement friendly content to the informative, not instead of it. Nevertheless, if there is a pressure from investors and owners of maximising profit, some displacement can be expected. This, McManus says, is due to the

costliness of objective reporting on significant events and issues (i.e. conflicts and war reporting) than it is to produce merely interesting content. Though some important issues are cheap to produce, but can seem uninteresting to parts of the readership whom then can look at the entertainment parts of the newspaper. In contrast to TV, localized information carries only the penalty of additional news gathering cost (McManus 1994:183-185).

When assessing whether a consumer or business perspective is dominating an article I have focused on both the headline, which indicates the main issue, and also the form used to relate to the reader. If the form of expression is directly relating to the reader in the second person form (i.e., 'this is how you can make use of the new 3G network'), there is probably a dominant consumer perspective in the article. One must, however, also note that a consumer issues can be written in a business perspective. These articles is defined as business oriented because they in the headline have a business theme, further because they do not approach the theme based on corporate sources and also because they don't include any guiding aspects for readers. Furthermore, differences between consumer –and business journalism relate to how the article is presented, and which reader segment it targets. For instance, a consumer perspective on new 3G handsets might focus on the cell phone as a fashion symbol or an entertainment device directed towards a young technology aware audience. In contrast, a business report on 3G might rather focus on how it can improve efficiency at the workplace and strengthen flexibility for businesses.

One might argue that the high number of consumer articles in the largest Norwegian newspapers, which often provides tests and price guides, have contributed to create consumer awareness towards mobile phone costs and call rates. The core foundation for such consumer journalism lie both in a generally high consumer potential among most Norwegian newspaper readers, in combination with a highly competitive, and often confusing, operator –and service environment. Furthermore, as the introductory example illustrated, the press is continuously fed information from industrial players.

In South Africa the ownership rate of mobile phones in are to a large extent following existing patterns of divides. The metropolitan versus rural divide, differences in wealth and others variations such as those of literacy, income, access to other technology, education and access

to information and media[28]. This corresponds well with the digital divide theory and that if anything the newspapers with its readership are to a large extent part of the metropolitan network falling reinforcing the inclusion exclusion paradigm, as described by Castells (I will elaborate this further in chapter six).

As described above, the sheer focus on consumer issues related to 3G varies greatly between Norway and South Africa. Seen in light of the consumer cultures related to the use and access of telecommunications, these differences might relate to many factors such as the absence of number portability, the strong identification with brands, lack of competition in the market and income inequalities. For instance, the high frequency of consumer issues and pricing information on telecom services in business oriented articles might not be coincidental. Gillwald & Esselaar (2004) says that high telecom prices were an inhibiting factor for the success of businesses in South Africa (Gillwald & Esselaar 2004:24). Awareness created in business journalism towards consumer issues could then be seen in relation to this. This however, stands in contrast to the lack of consumer journalism in non-business oriented reporting, and which is also a tendency opposite of the situation found in Norway. Most consumer issues in Norwegian newspapers appear in consumer oriented articles.

> Perhaps the greatest challenge to the development of the sector [the South African telecom sector] is human capital. For the benefits of ICT to be realised, state policies need to be focused on developing knowledge entrepreneurs, knowledge workers and knowledge consumers. (Gillwald & Esselaar 2004:32)

According to Gillwald and Esselaar the regulatory environment in South Africa needs to focus on building up knowledge in all parts of the sector – from engineers to consumers. The latter is especially interesting for this discussion. Consumer knowledge and consumer awareness towards ICTs are the key element in consumer reporting. Journalism dealing with consumer issues is, as Thomas Hylland Eriksen describes it, directing itself to the reader as a consumer rather than a member of society. By doing so, the newspapers create an identity for the reader as a consumer (Eriksen 1997). Egil Sundvor adds to this that when dealing with consumer journalism the relationship between reader and newspaper is defined by the way of approaching the reader as a consumer, a user of rights, client and private person (Sundvor 2000:11). It is also in this relation we find the most significant difference between these two

[28] South African Advertising Research Foundation's *LSM Presentation June 2006*

countries. Norwegian newspapers have far more consumer oriented stories related to 3G than the South African newspapers.

3.3 Political perspectives on 3G

Political perspectives on 3G related are close to none existing in the newspapers included in this study. The political approach to 3G issues is worth considering, but is by no means a dominating trend in this journalistic output. Of the 341 articles analysed, only two Norwegian and two South African articles had a main perspective related to political issues of the 3G deployment. And the four politically oriented articles were all published by the business-oriented newspapers; two in *Dagens Næringsliv* and one each in *Business Day* and *Business Report*. In contrast, political issues were rather frequently appearing as secondary issues in articles mainly concerned with business issues. About 18.3% of the Norwegian business oriented articles also addressed some political issues. In South Africa this figure was 10.7%. From these numbers one might conclude that political initiatives and involvement in 3G processes does not gain much attention in journalistic media. And if so, they are placed as secondary issues in a business oriented framing.

3.4 Technology-specific perspectives on 3G

Another category, the technology-specific, must also be considered when mapping out the journalistic perspectives on 3G. Technology-specific journalism is hard to separate from consumer journalism, nevertheless, it is here classified separately from consumer journalism due to some characteristic features. Firstly, these articles is considered separately because the main focus lies strictly on technological information, or on the use or usefulness of new ICTs (whether it is a new type of cell phone network or a faster broadband), without focusing on specific handsets or network operators. Further, this perspective might also spread technical know-how amongst the readers, without favouring one 3G service or product over another. So, the core argument for classifying some of the articles as technology-specific is because the main priority seems to be placed on giving information about new technological infrastructure or technological innovation. Hence, readers are not approached as consumers, but rather as citizens.

Altogether there were ten informative and technology-specific articles in both the Norwegian and the South African material. It represented respectively six and five percent of the total 3G coverage. In terms of the volume (number of articles), the informative technology-specific 3G reporting is quite similar in Norway and South Africa. The sources cited in these articles also follow the same patterns as the other categories: telecom companies are the major visible source of information. Nevertheless, the technology-specific 3G reporting distinguishes itself from the general picture in a few ways illustrated in the table below.

Table 3.8 National differences in technology-specific 3G reporting

	South Africa	Norway
Geographical proximity:		
National	20%	80%
Regional	20%	0%
International	60%	10%
3G explanation	30%	70%
Company Source	90%	50%
Focus on major telecom player	70%	20%

In South African newspapers the geographical context of technology-specific reporting was in 60% of the cases international, altogether had 80% of the articles some international references. In contrast, Norwegian technology reporting was characterised by a highly national framing. It further differs in terms of how often 3G is explained in these articles. These results are significantly different that those presented for the business oriented journalism. Firstly, the Norwegian 3G reporting is in general more internationally oriented than the South African, this picture is however reversed the case of technology-specific 3G reporting. And secondly, the frequency of 3G explanations also follows an opposite trend for this category. In general the South African articles are more frequently providing background information about the 3G technology, mostly because of the business oriented reporting. This picture is quite different in the technology-specific reporting. Thirdly, one must note that in the Norwegian technology-specific reporting the major telecom companies are hardly mentioned. Only two articles (20%) briefly mentioned Telenor. In comparison, the South African technology-specific reporting was frequently addressing major telecom companies, both national and international.

Only about five percent of the articles analysed had a technology-specific orientation towards 3G. Nevertheless, the nuances presented above must be kept in mind in the following part of this chapter. Before moving on to summarise the larger picture of how journalistic media in Norway and South Africa cover 3G issues, a few other considerations have to be made first.

3.5 Beyond national differences – newspaper type and 3G reporting

The four categories chosen to classify the 3G related articles are all based on other traditional categorisation of journalistic content. Newspapers themselves often operates with different categorisation of content such as; 'business news', 'international news', 'sports', 'lifestyle', 'entertainment', etc. Such separating of newspaper content often includes the four categories used in this study. Not all of the subjected newspapers, however, have such information available in their article archives. So, the newspaper's own categorisation of 3G reports is therefore not taken into account in this analysis. Classification of the 3G related articles is therefore done exclusively based on the parameters set in the article scheme (as mentioned in the previous chapter).

3G related issues that find its way to the print press often differ from traditional news in ways of presentation and distribution. They are also often placed separately, within the newspapers, from traditional news stories. Nevertheless, for specialised business newspapers, such as *Business Day* and *Dagens Næringsliv*, 3G related topics are more often presented as traditional news stories than for instance in a tabloid daily. This might relate to the fact that business oriented newspaper have a more narrowly defined field of coverage, the business sector, in which the telecom sector is one of the most prominent financial industries.

Business Day is the South African newspaper focusing most on 3G. This national daily is rather small in terms of readership and has a highly educated and high income readership[29]. Together *Business Day* and *Business Report* stand for almost ¾ of the South African articles included in this study. In general there is a massive focus on 3G in business oriented newspapers, both in South Africa and in Norway. An explanation for this might be, as mentioned above, the powerful position of ICT companies in the financial markets. This might again have lead to a stronger focus on ICT related issues in the editorial rooms of these

[29] *Business Day reader profiles.*

specialized newspapers. Table 3.9 shows the number of 3G related articles published between June 1st 2004 and December 31st 2005. Numbers in parenthesis indicates the percentage of total 3G coverage in each country.

Table 3.9 Newspapers and percentage of the total number of 3G articles by country.

	Number of articles
Aftenposten (N)	60 (38%)
Bergens Tidene (N)	9 (6%)
Business Day (SA)	86 (47%)
Business Report (SA)	46 (25%)
Cape Argus (SA)	16 (9%)
City Press (SA)	13 (7%)
Dagbladet (N)	22 (14%)
Dagens Næringsliv (N)	64 (40%)
Dagsavisen (N)	3 (2%)
Sunday Times (SA)	18 (10%)
The Mercury (SA)	4 (2%)

(N=Norwegian, SA= South African)

As the figure above show, *Dagens Næringsliv* is the Norwegian newspaper which published most 3G related articles. This newspaper alone represented 40% of the total number of Norwegian 3G articles. In the other end, *Dagsavisen* - which is the smallest newspaper included in this study - is the newspaper with the lowest number of 3G related articles. *Dagsavisen* only published three 3G related articles during these 19 months. In South Africa, *The Mercury* - which is the smallest South African newspaper included in this study – also has the smallest 3G coverage with only four related articles (two percent of the total South African 3G articles). This indicates that the small local/regional newspapers are less focused on covering 3G issues. In contrast, the business oriented newspapers in each country has in both cases the strongest focus on 3G. Of the non-business newspapers included in this study, the covering of 3G issues increases with the magnitude of the newspapers readership[30].

The division of 3G articles in Norwegian and South African newspapers follow only partly a similar trend. For instance, while Norwegian non-business newspapers contribute to a

[30] Except from *Cape Argus*: this daily newspapers has slightly more 3G coverage than the weekly newspaper *City Press*. The daily versus weekly difference is probably the explanation for this exception. Furthermore, one must note that the low number of 3G related articles published by the two major national newspapers in South Africa, the *Sunday Times* and the *City Press*, can probably be explained by the fact that both are printed on a weekly basis. This means that *Dagbladet* and *Aftenposten*, which are the two major Norwegian national newspapers included in this study, has published seven times as many editions than the two major South African newspapers during the period of research.

significant amount of 3G related articles, the South African non-business national newspapers are more moderately in terms of volume of 3G articles. In contrast, South African local/regional newspapers (*Cape Argus* and *The Mercury*) have more 3G articles than the Norwegian local/regional newspapers (*Bergens Tidene* and *Dagsavisen*). Otherwise there are no noticeable differences between the subscription newspapers and the single copies sales papers. On the other hand, the most significant similarity in 3G reporting in South Africa and Norway is that all the business oriented newspapers seem to have a significantly stronger focus on this 'new' mobile technology than other types of newspapers: *Dagens Næringsliv* is the Norwegian newspaper most frequently covering 3G issues, while *Business Day* is the South African newspaper that focuses most on 3G issues. Table 3.10 show how the breakdown of articles into categories and according to newspaper.

Table 3.10 Division of articles according to newspaper and article category

	Business	Consumer	Political	Technology-specific	Total number of 3G articles
Aftenposten (N)	75%	22%	0%	3%	60
Bergens Tidene (N)	44%	11%	0%	44%	9
Business Day (SA)	93%	0%	1%	6%	86
Business Report (SA)	91%	2%	2%	4%	46
Cape Argus (SA)	63%	38%	0%	0%	16
City Press (SA)	100%	0%	0%	0%	13
Dagbladet (N)	9%	77%	0%	14%	22
Dagens Næringsliv (N)	89%	6%	3%	2%	64
Dagsavisen (N)	33%	67%	0%	0%	3
Sunday Times (SA)	67%	22%	0%	11%	18
The Mercury (SA)	50%	25%	0%	25%	4

(N=Norwegian, SA= South African)

As the figures above show, three apparent distinctions are worth mentioning. Firstly, all the economy oriented newspapers have a highly business oriented perspective on 3G. Secondly, only *Dagsavisen* and *Dagbladet* have higher percentage of consumer oriented articles than other orientations. Thirdly, the regional newspapers *Bergens Tidene* and *The Mercury* have the most balanced coverage in terms of varying between the four categories.

3.6 Sources

The relationship between the press and its sources are highly emphasised by Sigurd Allern (2001), among others. He says that the pressure of making profits has forced the news institutions to accept widespread use of press releases and other 'journalistically processed information'. In this lies an argument that journalistic media are continuously tempted to use information that is provided from professional communications and information divisions. This is a low cost way of producing content. As Allern further argues, the traditional news criteria must be supplemented with some 'commercial news criteria';

> The larger the amount of resources are in terms of work time, staff and money it costs to cover an event, pursue or disclose a story; the less the chances are for it to become a news story.
>
> The more skilfully the sender has arranged a story journalistically; the higher chances are for it to be prioritised as a news story. (Allern 2001:22- translated from Norwegian)

If these news criteria are taken into consideration, reporting on 3G issues must therefore also include a focus on balancing the massive flow of externally provided information, such as press releases. I have in this respect gone through the press release archives of Telenor, Netcom, MTN and Vodacom (the four major 3G operators in Norway and South Africa), and gathered all the press releases published between June 1st 2004 and December 31st 2005 containing the word 3G. The result showed that Telenor had ten press releases containing information about their 3G services. NetCom had seven such press releases while MTN had eight and Vodacom nine.

MTN 'came through' with three press releases about 3G in one or more of the six South African newspapers included in this study. One of which was reported in two newspapers. Vodacom had four press releases covered in the South African newspapers, of which two were reported in two newspapers. Telenor saw five of their ten press releases on 3G issued in one or more of the five Norwegian newspapers. And their press release on their own 3G launch was subjected in as much as three of the five Norwegian newspapers. NetCom had also five of their press releases issued in the Norwegian newspapers. Three of which were subjected in two newspapers. Of all the 3G related press releases distributed by these four operators, the average penetration rate for the two Norwegian 3G operators are 59 percent. The average for the two South African 3G operators is 41 percent. These numbers strongly underpins the commercial influence on 3G reporting.

"News organizations are edited according to fixed plans, and the editorial strategy builds on a market evaluation of the content mix. […] This also reflects the news culture of the different editorial houses […]." (Allern 2001:5) In Allern's discussion on the news institution and news values and structures he mentions that one 'external' factor that influences the news process is the sources. Source influence might be more significant in articles dealing with economical issues (Allern 2001:10). Allern further writes that *Dagens Næringsliv* mainly prioritises economical news with direct interest for leaders and mid leaders in private and public sector, whereas news events like accidents, crime and sports are excluded purposely (Allern 2001:13). He further describes Dagens Næringsliv as a newspaper that doesn't prioritise political news (2001: 20). The cheapest way of making news is build on editing press releases or press conferences (2001:21). Journalistic news values are so abstract that they alone tell us little about different editorial priorities. One must also include each newspapers reader orientation to add meaning to the different news criteria. This editorial market strategy is a necessity in every editorial house and must therefore be taken into consideration when discussing the criteria that govern news reporting (2001:23).

3.7 Summary

When summarising this chapter there are three distinct notions to be made from the analysis presented above. Firstly, the general picture of how 3G issues are covered in journalistic media is close to one dimensional. It is the commercial interests that are represented in terms of which sources are cited and referred to in these newspapers. Further, the majority of the subjects and issues in focus in these reports are also overwhelmingly about people and companies with an economical interest in 3G. Newspapers are also often using the large telecom player's pre-fabricated information as news stories. And, it is the business oriented newspapers that mainly cover 3G related issues. These four factors are leading to a conclusion that Norwegian and South African 3G reporting is similar in that they both have a strong bias towards the commercial side of the ICT industry.

Secondly, Norwegian newspapers more often address consumer issues related to 3G. This is might be related to the consumer culture in Norway and the fact that everyone – literally- are highly dependent on ICTs in their everyday lives. In South Africa, on the other hand - where

72% of the 3G related articles originated from purely business oriented newspapers – consumer issues gained little coverage.

Thirdly, there is almost no attention given to political initiatives and regulatory issues related to 3G. This might mirror the general lack of awareness towards the importance of political involvement in developing towards an Information Society. Nor is there much technology-specific reporting related to 3G issues - however significantly more than the former category- in either of the two countries. The following part of this thesis will elaborate further, from a theoretical perspective, the role of journalism in contemporary societies.

Chapter four: journalistic media and ICTs

Some see the role of journalism in contemporary societies as one of declining importance with new media and a rapidly changing technological environment constantly challenging the journalistic profession (Bardoel 1999). This chapter will largely evolve around assessing some key points on the function of journalism in a societal context increasingly characterised by information technology density. A natural assumption in this respect would be that in an Information Society journalism must be viewed according to a highly technology dense environment, while in a traditional society journalism will have to be approached respectively. When comparing two countries like Norway and South Africa, the contextual differences vary greatly and must be taken into consideration. This chapter seeks to highlight how journalistic products are shaped by their context.

A theoretical view on the role of journalism in the Information Society is, as Jo Bardoel formulates it; "Over the past years, it has been repeatedly been said that the function of journalism is gradually being eroded. Underlying such concerns are the changes that have taken place in the journalistic dissemination of new media technology." (Bardoel 1999:379) The journalist role in the contemporary Information Societies are facing new challenges; in terms of production, forms of distribution and ultimately – as Bardoel indicates – in the role as a communicator between the public and power holders. The following section of this chapter will concentrate around these new challenges facing journalism.

4.1 The role of journalism in the Information Society

When studying journalistic media one cannot exclude an exploration of the many features shaping the context of the journalistic output. As Brian McNair says:

> The journalistic text is viewed as the product of a wide variety of cultural, technological, political and economic forces, specific to a particular society at a particular time. Understanding the content, meaning, role and impact of journalism therefore requires a description and analysis of the broader social context within which it is produced and of the factors of production which determine that context. (McNair 1998:3)

The broader social contexts mentioned by McNair will vary from place to place. The rapidly changing technological environment, which is treated in this section, is one such contextual factor that is continuously affecting journalism. Jo Bardoel (1999) says that the role of journalism in the contemporary Information Society is characterised by a communication pressure. There are, according to Bardoel, three factors contributing to this communication pressure; the large volume of information, the speed of information and the density of information. The first factor is related to the growing information flow and growing number of information channels or 'new media'[31]. Secondly, the speed of information relates to the growing pace of news and information circulation in society. The speed factor demands faster reporting from the journalist and affects journalistic content in ways of selection and depth.[32] Finally, the density factor of communication pressure is rooted in new ways of communication habits in society. Each message can, in principle, reach and be received by anyone. So getting attention in this information concentrated environment might be hard for journalist (Bardoel 1999:380). Bardoel concludes that 'civil society' is being 'mediatised', and there is little or no journalistic intervention in the new forms media communication (1999:381).

Competition from 'new media' has brought about questions over the future of the printed newspapers existence. But, as Bardoel explains, the loss of readers from newspapers to newer electronic media occurs mostly in relation to "newspapers and magazines that, in their presentation and simplicity, address the same broad public as broadcasting stations" (Bardoel 1999:383).[33] This does however not mean that there is a decreasing consumption of journalistic content, or that consumers get lost in the massive flow of information. Rather, there is a tendency towards an increased consumption of information in total, through different media. And, as McNair (1998) says; the public is today 'media literate', and aware of their possibilities in the Information Society. Bardoel also states that manoeuvring in the high tide of the information flow is no longer experienced as a struggle for media consumers

[31] By 'new media' I refer to electronic media originated from the development in ICTs. Such media as the Internet, wap, 3G services, etc.
[32] When Bardoel argues that the increased speed demand in journalism might weaken the quality of information he is talking about media in general. Newspapers should therefore be mentioned as having a somewhat different relation to the speed factor because of its status as having a journalistic surplus-value.
[33] This trend Bardoel describes corresponds well with the situation of the contemporary newspaper situation in Norway. The two largest Norwegian tabloid newspapers *Dagbladet* and *VG*, experienced a decline in circulation in 2005. Similarly they have experienced a rise of readership in their internet news pages. Figures from 2005 showed that both newspapers experienced decline in circulation with over 21000 copies. In contrast, Norwegian niche papers have not experienced the same fate as the tabloids, rather the opposite (Mediebedriftenes Landsforening 2006).

because they develop strategies – often using technical accessories- to deal with the flow (Bardoel 1999: 383). In conclusion he says that journalism is now an avoidable link in the chain of information provision, but the function of journalism as a leading director of social debate might be more essential than ever. “Greater individual freedom for citizens produces, more than ever, the need for common orientation. This might be the most important mission for journalists in the future – a mission that calls for responsibilities and skills beyond the present journalistic practice.” (Bardoel 1999: 390) Journalistic media are, in Bardoel’s view, functioning as a guide for citizens in a jungle of information. When again turning back to the analysis from chapter three, the common orientation journalistic media provides about 3G is almost one exclusively devoted to the commercial aspects of this technology. And, if this is representative for journalistic media’s general orientation about ICTs, the commercialised common orientation will be likely to have negative effects on people’s awareness towards important features in the Information Society.

The relationship between journalistic media and society is viewed as one where both possess the knowledge needed to make sense of each other and the shared environment they exist within, or as McNair says about journalism: “its narratives are built around assumptions taken for granted by both producers and consumers; that journalism is a moral and ideological force as well as a source of cognitive data.” (McNair 1998:31) The most fruitful approach to the sociology of journalism is, in McNair’s view, based on the dynamics of the production environment and the impact the surrounding elements have on both form and content of journalistic output (1998:33).

4.2 Media effects

The effects journalism and society have on each other are also subjects for discussion for a sociologist. There is a mutual interaction, but the one attracting the most attention for the sociologist, is what kind of effect journalism might have on society. But social effects of journalistic texts can only be understood when one knows the nature of their reception environment. This means in McNair’s view that one must emphasise the cultural status of the journalistic text (McNair 1998:35). The cultural status can vary from media to media, but they all claim to make some kind of truth, which their readers tend to accept. Though the audience of today are relative media literate, relatively suspicious and disbelieving and increasingly cynical (1998:38, 39). McNair says further that the effects, impacts and influences journalism

has on individuals, organizations and social processes are shaping the cognitive environment in which we live. Journalism is an important source of our knowledge about the world, we are willing to learn from it about the world we live in, assuming that journalism commands our trust (1998: 34). When moving from effects on individual to potential effects on society at large, McNair says that:

> […] journalism can shape and define the environment within which events and issues are viewed as important, made available for public discussion and acted upon. Journalism has the power to make things visible to the public and thus to make them important.[…] Our concerns about the world are not related so much to what is happening as to what journalists tells us is happening. This is a powerful effect with huge implications for wider social processes. (McNair 1998:49)

McNair also says that both the quality of information (the message status, believability and credibility) and the nature of the reception environment are of great importance when assessing the effects of journalistic products. (1998:39)

4.3 Media and language

The access to codes is also crucial. Language, like official languages as Norwegian and English, must be considered as an important feature of the interpretation of media texts. In the case of this study this aspect will form a basis of difference between Norway and South Africa. It will be discussed further in the homogeneity/ heterogeneity section. Another important feature of the media text must also be highlighted; the language used in terms of vocabulary. The technical language that follows this kind of reporting is of great importance in relation to the study of the media coverage of the third generation mobile network. Terms like UMTS and 3G are frequently used when reporting these matters. The more business related news also comes with a business specific vocabulary. McNair adds to this that: "Journalists are required to, [...], know their audience and to address its members with an appropriate level of linguistic complexity and sophistication. If the message is linguistically too simplistic or too difficult for its audience it will not get through successfully." (McNair 1998:40). As this study will show, this view of the journalist knowledge of his/her reader will be challenged on the basis of figures published in *Aftenposten* showing that under 25% of Norwegians understand technological terms like IP-telephony (25%) and UMTS (12%). The figures also shows that economical terms used in journalistic texts also are to complex and

sophisticated for the reader.[34] In addition there is a lack of background information explaining the terms used both in South African and Norwegian coverage of 3G. In other words there is a tendency to exclude readers who don't already possess the sufficient knowledge about the theme. This stands in sharp contrast to the widespread use of cell phones and internet in the two countries.

4.4 Sources

The sociology of sources is a way of approaching journalism by studying the influence of sources on media output (McNair 1998: 143). In terms this thesis, such a critical approach to journalism will take the form of comparing press releases from 3G providers with related articles published by newspapers. In addition I have mapped out the interviewed peoples in the articles and identified all the displayed sources. All my findings related to sources point in the same direction; all the dominant sources are somehow people related to the cell phone industry, people with direct economical interests in the 3G launch. Sigurd Allern explains the widespread use of press releases and press conferences in journalism by the cost of making 'self made' journalism (Allern 2001:21). It is however noticeable that in –as in the case of the example in the introduction – the press conferences goes beyond a function as sources and become a significant part of the story. It is also worth highlighting that about half of all press releases published by Telenor, NetCom, Vodacom and MTN came through in newspapers, thus further emphasising the commercial bias in ICT reporting.

McNair argues that the traditional view on the sociology of news sources - controlling, socially reproductive, ideological apparatus for the dominant ideology- isn't valid anymore. Both the dynamics of the market and impact of new technology undermine this approach. He concludes that no one can dictate what news media say about events or issues because the power of news managers and source professionals exist to a significant extent autonomously from owners and editors. The media environment is in McNair's view chaotically unpredictable rather than ordered hierarchically structured stability (McNair 1998:157, 158). Effective management of news is not only about economic resources; "skills in understanding how news works, and in designing events and happenings which can exploit that knowledge,

[34] These figures were based on a national survey published in *Aftenposten* on the 24th October 2004. They are based on a study conducted by Opinion on behalf of *Aftenposten*. The figures further show the demographical determinants of the understanding of professional terms used in journalistic texts.

can be just as, perhaps even more, effective in setting news agendas and securing favourable journalistic definitions of issues than can ownership and control of media." (1998:160) However McNair stresses that the political environment also must allow news media to operate and run independently. This is most likely to happen in an advanced liberal democratic political system (1998:164).

4.3 Summary

The role of journalism in societies characterised by numerous new media and information density is, according to Jo Bardoel, one of creating a common orientation for the public. Following the sociology of journalism described by Brian McNair, journalism is largely shaped by their contextual environment. The common orientation journalism are supposed to provide is therefore weakened by contextual forces such as commercial pressures and language barriers. In contemporary societies, where a rapidly changing technological environment largely shapes the societal context, the journalistic media doesn't seem to cope with the development, and the external threats seem to be gaining influence on journalistic products. I will in the following part of this thesis elaborate some of the main features shaping the Norwegian and South African ICT context.

Chapter five: Norway and South Africa in the Information Age

As the previous chapter highlighted, many contextual features influence journalism. This chapter seeks to assess the foundation of ICT reporting in Norway and South Africa by exploring how these two countries are coping with the development in the ICT sector.

Manuel Castells (2000), among several others, emphasizes the significance of ICTs in contemporary societies. Both Castells and Alison Gillwald stresses, the development of this globally interconnected, communication infrastructure is highly uneven (Gillwald 2005:8, Castells 1998:92). This unevenness is also evident when comparing diffusion and utilisation of ICTs in Norway and South Africa. These differences will be further addressed in the later in this thesis.

5.1 Assessing the Information Society

The use and dissemination of ICTs in Norway and South Africa are developing in very different contexts and are thus shaped differently. Demographical and geographical variations are determining people's experiences with ICTs as well as other contextual considerations such as regulative environment, market demand, demographical and geographical factors, investment opportunities etc. In terms of the Norwegian and South African implementation of the 3G network, national contexts have determined how this new technology is deployed, disseminated, promoted and which geographical areas that are covered. When assessing the development of ICT infrastructure and the utilisation and use of ICTs one must approach the different contexts knowing that, as David Morley explains; "For all their wonders, these technologies [ICTs] are only as good as the material, social and institutional structures in which they are embedded, from the reliability of the local phone lines, to the electricity supply, to the efficiency of the relevant bureaucracy."(Morley 2003: 441)

One of the characteristics of the Information Age is, according to Frank Webster (2002), the massive growth of media and media products, and its permeation throughout society. From this development there has followed an explosion of different user-cultures, each of which has grown out of the different ways people adapt technology to suit their own needs. When assessing the characteristics of contemporary societies in a technological perspective one must

therefore include both qualitative and quantitative parameter in the process. Numbers regarding cell phone penetration and Internet connections are not alone valid parameters when assessing the status of an Information Society. A further focus on the social and material fundament of ICT development in Norway and South Africa will be emphasised in this chapter[35].

5.2 South Africa in the Information Age

"All our activities are aimed at a single objective: to focus the benefits of the Information Age and the Knowledge Society on the growth and prosperity of the South African society, in all its guises, across racial groups, income groups and gender […]" (South African Department of Communications *Annual Report 2005/2006*:9)

The South African telecommunications sector might be approached from two perspectives: One is by comparing the South African situation with developed countries. Another will be viewing the situation from an African (developmental) perspective. Before pursuing this two folded contextual situation of the South African society I will further assess some of the features that characterise South Africa in the Information Age.

5.2.1 Key Numbers in Telecommunication use and development in South Africa

Table 5.1 Access to ICTs in South Africa

Internet penetration (household)	11%
Mobile phone penetration	49,5%
Fixed-line penetration (houshold)	10,1%
Households with access to telecommunications	46%
In-house phone (mobile or fixed-line)	22%
Broadband penetration (household)	N/A

According to Alison Gillwald 46.9% of South African household had access to telecommunications in 2003 (Gillwald 2005:132). This includes both mobile phone access

[35] Alison Gillwald says that the standard path of technological adoption in societies; […] is weak initially until a critical mass is achieved, followed by a subsequent explosion in growth, which then reduces as the market gets saturated – […]" (Gillwald 2005:133) This study will, as others in the same field, rely on data which changes rapidly and the course of ICT adoption described by Gillwald might further threaten a long lasting reliability of the data presented in this chapter.

and fixed-line access (the number is based on access to either of the two types of telecommunication). Mobile phones are often used as the 'in-house' phones in South African households due to the relatively poor infrastructure of the fixed-line networks. About 22% of South African households had in 2004 either a fixed line phone or an 'in-house' mobile phone. In March 2005 South Africa's mobile penetration rate was, according to Telkom, at 49.5%.[36] The fixed line penetration was at 10.1%, or 4.7 million subscribers. The South African Internet penetration rate was, according to Telkom, in March 2005 at 11%. Only 25 000 ADSL (broadband) subscribers had signed up since the service first was launched in 2002 (Gillwald 2005:133). Nevertheless, there were about 200 different Internet Service Providers (ISPs) in South Africa in March 2005. The number of South African 3G subscribers was not available at time of writing.

5.2.2 The South African telecom environment

"The telecommunications sector in South Africa continues to be characterised by relatively high retail prices, super profits, job losses, licensing delays and deadlocks with minimal new foreign investment in the sector." (Gillwald 2005:131) Excessive price levels on telecommunications have, according to Gillwald, contributed negatively to the high cost of doing business in South Africa. In addition, the decline in employment in the telecommunications sector, from 99 945 people in 1994 to 77 347 in 2003, indicates the lack of new entrants to the market (Gillwald 2005:134-135). About 1.05% of the total workforce was in 2003 employed in the telecommunications sector. Altogether, the telecom sector contributed in 2002 to about 5.1% of South Africa's GDP, which is, according to Gillwald, 'not a poor contribution' compared to other lower-middle-income country standards.

The South African telecommunications market is currently dominated by three major players; Telkom, Vodacom and MTN. All three are telecom operators. Telkom runs fixed line and Internet operations[37]. Vodacom and MTN are the two major mobile operators in South Africa (Vodacom is 50% owned by Telkom and had in May 2006 the largest subscriber base in

[36] According to Alison Gillwald the South African ownership rate of mobile phones was in 2004 at 32% (Gillwald 2005:148). However numbers from Telkom (2005) suggests about 40% penetration in 2004. There might be different numbers because Telkom counts mobile subscribers, while Gillwald provides the number of people owning mobile phones.

[37] The South African fixed line market is decreasing with 2.4% annually. From 2004 to 2005 the fixed-line subscriber base fell from 4.83 million to about 4.7 million subscribers.

South Africa with about 20 million subscribers[38]). In addition there is a smaller third mobile operator, Cell C.

In 2005, Vodacom had approximately 56% market share in the South African mobile market, while MTN had about 35% market share and Cell C had 9% (Telkom 2005). These three mobile operators also have 3G licences, however only Vodacom and MTN were running commercial 3G services during the time of my study.

> With the low levels of household PC ownership (12%) and with the high cost of the fixed line infrastructure, there is a danger that the Internet market will rapidly reach saturation. It is not likely to drive uptake of residential broadband services and until there is widespread connectivity at the household level with access to enhanced services, citizens will not be able to participate optimally in the information economy or society. (Gillwald 2005: 150)

Alison Gillwald notes that; "Telkom's monopoly in the fixed-line market has negatively impacted the provision of the Internet, with a stagnant number of subscribers and limited take-up of new technologies such as broadband." (Gillwald 2005:50). The access to telecommunications is mostly based on the relatively high numbers of mobile phones. Most of the mobile subscribers are pre-paid customers, with low ARPU[39].

5.2.3 Demographical variations

"[…] location, gender, age and income are all significant predictors of mobile phone ownership throughout South Africa." (Gillwald 2005:142) Of these are parameter is income the strongest indicating factor of mobile ownership. The ownership rates of steadily increases with monthly income starting at about 20% for low-income groups reaching a 100% for those in the top income groups (Gillwald 2005:142). This trend is confirmed by the South African Advertising Research Foundation (SAARF) which states that in 2005, the mobile penetration rate increased according to Living Standard Measures (LSM[40]), rising from level one to ten.

[38] Vodacom press release May 2006. One must note that these numbers are based only on the number of sim-cards registered in Vodacom's network. The possibility of people having more than one sim-card is not taken into consideration when counting subscribers. The 20 million subscriber base may therefore diverge from the actual number of users of the network.
[39] ARPU stands for Average Revenue per User.
[40] SAARF's Living Standard Measures is a marketing research tool which divides the South African population into ten groups where one is the lowest and ten is the highest. Parameters such as access to telecommunications, media, electricity, hot running water etc determine who belongs to which groups. This method of segmentation is also used by many of the newspapers included in this study in relation to assessing their readership profiles. It must be emphasized that this tool is exclusively based on consumer parameters and does not include access to

Not surprisingly, the mobile penetration rate deviates quite strongly from how the population at large score on these living standard measures[41].

Table 5.1 LSM groups and mobile penetration rate in South Africa.

Living Standard Measure Group	Mobil phone penetration
LSM 1	0%
LSM 2	19%
LSM 3	24%
LSM 4	35%
LSM 5	40%
LSM 6	51%
LSM 7	62%
LSM 8	72%
LSM 9	77%
LSM 10	88%

On the other hand, differences between genders are relatively small. This is reflected in the mobile ownership rate for males and females, with a difference in ownership of only 5.6% higher among males than females. Two of South Africa's nine provinces do not have any commercial Internet access point (Gillwald 2005:134), and South Africans who access Internet at home are in 80% of the cases situated in metropolitan areas. The remaining 20% are in other urban areas. In contrast, the rural population represents an insignificant share of the residential Internet penetration. This rural- urban divide is also characteristic in terms of access of household phones. In the rural parts of South Africa only seven percent has a household phone in contrast to about 81% in major cities and about 91% in other urban areas (Gillwald 2005:137). In terms of money used on telecommunications there is also a stark contrast between fixed-line expenditures in rural and metropolitan areas. The average monthly fixed-line expenditures in metropolitan areas were almost six times that of the average rural expenditure (Gillwald 2005:138). Gillwald explains that most users of payphones are black, very few of other race groups use them (Gillwald 2005:139). South Africans living in major cities are also more likely to own a mobile phone than people living in other urban and rural area. 55.6% of people in major cities own a mobile phone, 41% of the urban population owns a mobile phone and only 27.7% of the rural population owns a mobile phone (Gillwald

education, health services, medicines etc and is thus not actually a living standard measure tool fit to be used in a non-consumer perspective. It is therefore only referred to in this thesis to describe consumer patterns and access to various media.

[41] SAARF *LSM Presentation June 2006*

2005:141). There are also some significant differences in terms of age and ownership of mobile phones. Over half of the South African population between 25 and 39 years own a cell phone, while ownership of mobile phones is very low in the age groups over 50 years and those less than 20 years.

Common for all South African cell phone users are that they are highly loyal to their mobile operators and that attention on call prices is almost non-existing (Gillwald et al 2005: 141,144). As Gillwald notes;

> […] advertising based on the brand of the network, its community consciousness and dedication to black economic empowerment take on added importance. […] In general, the most common source of information on mobile phones is by word of mouth, brochures and catalogues. […] The lack of overt pricing information (in the sense of call prices) on the part of the networks is seen as a key obstacle to migration. (Gillwald 2005:144)

According to Gillwald the loyalty to network operators is based these factors; firstly, the brand value of the network operators is the most important factor affecting the selection of operator. The image of the network operator is thus an important factor for consumers both in the selection of operator and as an argument for staying with the operator, and identification is something governing consumer selection and loyalty in the South African telecom market.

Secondly, the lack of information on pricing of calls may have lead to this ignorance towards call rates among telecommunications consumer. Nevertheless, prices on handset deals and airtime discount packages were significant parameters when choosing operator. Gillwald also draws parallels between the ignorance towards call rates and the advertising strategies among the mobile operators; “Part of the explanation for this might be the lack of any comparative advertising between mobile operators on call prices. The conclusion is that this is typical behaviour of oligopolists cannot be far off” (Gillwald 2005:148). Another factor explaining the lack of awareness towards call rates might be trend of using payphones, call boxes and call centres during the expensive mobile peak hours (Gillwald 2005:149). Gillwald adds to this that; “[…] South Africans value communication services and are willing to pay an extraordinarily high price for them, pricing clearly remains and inhibiting factor, both with regard to ownership and usage.“ (Gillwald 2005:148) She further says that while pricing of mobile services are experienced as acceptable among South Africans, consumer behaviour suggests a lack of consumer awareness rather than satisfaction (Gillwald 2005:148).

Thirdly, number portability is not yet introduced to cell phone subscribers in South Africa[42]. This might affect consumer behaviour in terms of migration between operators in South Africa. As Gillwald indicates, consumers who already are on a mobile network have a strong preference for their existing network. People experience change of mobile network operator as difficult and expensive because of the costs related to changing phone number (Gillwald 2005:144). Nevertheless, even if change came without costs, 99% expressed a negative attitude towards changing operator (Gillwald 2005:141).

Yet another factor influencing the migration between-and selection of network operators is the area of coverage (Gillwald 2005:144). The vast size of South Africa has limited network operators to prioritise profitable areas. In other words, the metropolitan and urban areas are well covered whereas the rural areas are under-serviced.[43]

Prices on telecommunications in South Africa are relatively high. Alison Gillwald points out that the cost of an ADSL line or making phone calls during peak hours are relatively high. In addition, the fixed line telephony – which also facilitates dial-up Internet and ISDN connections – are skewed towards the business sector and the wealthy residential sector (Gillwald 2005:150). One must, however, note that there is only one overseas cable connecting the whole African continent (south of Sahara) to the World Wide Web[44].

Gillwald points out some features of personal Internet use; "Personal usage of the Internet is limited to banking, research (for example, school projects), job sourcing and applications. The Internet is not used regularly for getting information on sports or news – the major medium for this is TV, radio or newspapers." (Gillwald 2005:147) The users of Internet are mostly young people, whites and professionals. And Gillwald further points out that South Africans

[42] Number portability allows subscribers to change network operators without changing phone number. At the time of writing the number portability regulative has not yet been implemented among the South African mobile network operators (number portability is set to be implemented on November 10th 2006). The ICASA sent out a Government Regulation Notice on mobile number portability September 30th 2005. The mobile network operators have yet to fulfil the requirement of providing mobile number portability between operators. A research report conducted by World Wide Worx show that the awareness of the possibilities following implementation of number portability is very low in South Africa. The report also states that when people become aware of the possibilities with mobile number portability, about a quarter of consumers (and 19% of small and medium enterprises) might change network operator (World Wide Worx *Mobile Number Portability in South Africa 2006*).

[43] A Government initiative is aiming to secure telecommunications services to rural and economically marginal areas through the issuing of under-serviced area operator licences This is inherent in the Telecommunications Amendment Act which was passed in 2001 (Gillwald 2005:130). Alison Gillwald argues that the privatisation of the fixed-line network operator Telkom following this Act has proved as a failing strategy (2005:150).

[44] International Telecommunications Union *SAT-3 cable information*

generally lack interest of using the Internet for news-gathering purposes (and that Internet, when used, it is most often for work purposes). She sees this in relation to the ignorance of international affairs and inward focus among South Africans (Gillwald 2005:147).

5.2.4 The African telecommunication context

There are four large pan-African telecommunication operators; MTN, Vodacom, Celtel and Orascom. The African continent had in 2004 a mobile penetration rate of 8.8% and an Internet penetration of 1.8%[45]. According to the International Telecommunication Union (ITU) says that the situation in Africa is characterised by internal divides:

> Africa has its own digital divide. For example, Egypt has 17 times the fixed line penetration of Nigeria. While sub-Saharan Africa (excluding South Africa), has an average teledensity of one percent, North Africa (Algeria, Egypt, Mauritania, Morocco, Tunisia) has a comparable average of ten percent. Almost three quarters of all Africa's fixed lines are found in just 6 of the continent's 55 countries.[46]

South Africa is in terms of teledensity the top ranking nation among the major African countries. South Africa had in 2003 the fourth highest Internet user rate on the African continent, behind the Seychelles, Mauritius and Sao Tomè & Principe (ITU 2003). In terms of teledensity, according to Tim Kelly (2004), South Africa was in 2003 also ranked fourth in Africa, only behind Reunion, the Seychelles and Mauritius.

5.2.5 South Africa in an international perspective

The South African penetration rate in telecommunications is both high and low. Fixed-line, mobile phone and Internet penetration are high in regional standards. However, South Africa is less developed in terms of telecommunication than other countries in lower-middle income countries. The telecommunication access level of 46.9% is lower than the average for other lower-middle-income countries which has an average of 49.4 percent (Gillwald 2005:132)[47].

> South Africans (and Africans in general) utilise a multitude of communication mechanisms. […] the Internet in South Africa is not a popular medium amongst lower-income households. Expenditure on communications as a percentage of income is high compared to the developed world. (Gillwald 2005:149)

[45] ITU *What's the state of ICT access around the world?*
[46] ITU *What's the state of ICT access around the world*?
[47] By telecommunication access both mobile and fixed-line phones are included. Note that these 46.9% with access are households in which one or more of the members have either mobile or fixed-line.

Gillwald points out that South African Internet penetration (referring to 2004 figures at four percent of all households) was very poor compared to other lower-middle-income countries such as Argentina, Turkey and Poland. Also the time spent on Internet was low in South African compared to countries with similar penetration rates. And in terms of broadband connections, she notes that the South African market is almost non-existing in comparison to other lower-middle-income countries (Gillwald 2005:133).

An international comparison of telecommunication prices showed that levels in South Africa; "[…] were excessively high, particularly after adjustment for purchasing power parity, and as such, were a major obstacle to economic growth, wealth creation and creation of employment opportunities." (Gillwald 2005:134) Further comparative studies exclusively of broadband prices relative to income in South Africa and other lower-middle-income countries show that the South African price level far exceeds other comparable countries (Gillwald and Esselaar 2004:20).

5.3 Norway in the Information Age

The Norwegian society is one normally regarded as highly advanced in terms of how developed and adaptable it is to ICTs. However, in a Nordic context Norway are often regarded as second or third. The success of Ericsson in Sweden and Nokia in Finland as global pioneers in the ICT industry might have cast some shadow on the development of the Norwegian ICT-education and ICT-labour market. I will under present some of the key statistical facts about use and access of ICT in Norway, followed by a brief contextualisation with the Nordic situation.

5.3.1 Key numbers in telecommunications use and development in Norway.

Table 5.2 Access to ICTs in Norway

Internet penetration (household)	64%
Mobile phone penetration (household)	103%
Fixed-line penetration	82%
Household access to telecommunications	N/A
In-house phone (mobile or fixed-line)	N/A
Broadband penetration (household)	41%

Internet access rate was in the 2nd quarter of 2005 at 64% of the households in Norway. these were 893 000 broadband connections registered in 2005, which means that 41% of all households in Norway had broadband connections[48].

About 94% of all households in Norway had access to a mobile phone[49]. Over 57% of these households also accessed mobile phones with Internet, however, few actually use this device as an Internet access point. By the end of 2004 the mobile penetration rate in Norway stood at 103%[50]. This means that the total number of mobile subscriptions in Norway exceeded the total population with about 140 000. Furthermore, almost 0.5 million Norwegians changed mobile operator in 2005 (Post- og Teletilsynet Press release January 5th 2006). The number portability requirement was issued in December 2001 in Norway. Number portability has been highlighted by the regulatory regimes in both South Africa and Norway to be a necessity in terms of strengthening the position of the customers and forwarding competition in the telecom market. As mentioned above, South African consumers are highly faithful towards their operators, whereas Norwegian mobile customers have a very flexible attitude towards their service provider.

5.3.2 The Norwegian telecommunication environment

The Norwegian information and communication sector had 104 351 employees in 2004. Altogether were 13 168 people employed in the telecom sector in 2003 (about 0.55% of the total Norwegian workforce in 2003), and the telecommunications group is also by far the most value generating industry within the ICT sector. All in all the ICT sector contributed to about 4.5% of the national economy, and the telecommunication sector counted for about 30% of the total Norwegian ICT revenue in 2003 (about 1.32% of the total BNP in Norway)[51].

There are two large telecommunications networks in Norway; Telenor and NetCom. Telenor runs the largest fixed-line operation and also the largest mobile network in Norway. NetCom runs the second largest mobile network in Norway (in addition there is a small third mobile

[48] Statistisk Sentralbyrå (SSB) *Informasjonssamfunnet* , SSB *IKT i husholdningene 2006*
[49] SSB *IKT i husholdningenene 2006*
[50] SSB 2005:20, 25 (*Nordic Information Society Statistics 2005)*
[51] SSB 2005 (*Nøkkeltall om Informasjonssamfunnet 2004)*

network serviced by Teletopia). There are 71 Internet service providers in Norway, 13 companies run fixed-line operations and 23 companies offer mobile services[52].

5.3.3 Demographic variations

Access to Internet largely follows income variations and access to PCs in Norwegian households. The lowest income groups had in 2004 a penetration rate at 38% while the higher income groups had a penetration rate at 91% (the households with Internet access were also skewed towards families with two adults and children)[53]. The main divides in Internet use are based on gender, education, age, and income level. Men use the Internet slightly more than women. Highly educated people use it more than people without higher education. Households with high income access the Internet more than lower income households, and young people are more frequent users of the Internet than older people. Internet access and use is also a skewed towards households where the families have children. The number of broadband connections also varies with the geographical origin. Oslo had in 2004 the highest penetration rate in terms of broadband with well over 40% penetration. The more rural provinces; Hedmark, Nord-Trøndelag and Aust-Agder had all below 20% penetration of broadband[54]. One might conclude from this that there is in fact an urban: rural divide in Norway. Nevertheless, none of the Norwegian demographic variations listed above are very deeply rooted. The most prominent difference in terms of ICT access and use in Norway are still defined by generational gaps, the younger generations are more actively adopting new technology. And, in terms of mobile phone access, the most visible demographic variations are based on income-level. Low income households have a penetration rate at 84%. In contrast, higher income household groups had a penetration rate of 99%.

5.3.4 The Nordic context

The Nordic countries was in 2004 the most Internet penetrated region in Europe. Iceland tops the ranking of countries with Internet penetration in Europe, followed by Denmark, Sweden and Norway. These three countries are also on top three on broadband access. The Nordic

[52] Post og Teletilsynet *Nyttig å vite om mobiltelefoni*
[53]SSB 2005:64 (*Nøkkeltall om Informasjonssamfunnet 2004)*
[54] SSB 2005:53 (*Nøkkeltall om Informasjonssamfunnet 2004*)

countries were also the region in Europe in which Internet was being most widely used[55]. In terms of how often people used the Internet, Iceland, Sweden, Denmark, Norway and Finland, in that order, were the five top countries within Europe[56]. Furthermore, in a Nordic context, the Norwegian household Internet penetration rate of 64% in 2005 was somewhat weak. On average the Nordic household Internet penetration rate was at 70% in 2005. Norwegian broadband connection rate of 40% in 2005 was also modest compared to Iceland and Denmark which had respectively 63% and 51% broadband penetration[57].

The fixed-line penetration rate varied between 45.6% in Finland to 70.7% in Sweden. Norway had in 2004 the second highest fixed-line penetration in the Nordic region with a penetration rate of 67.1%, well above the Nordic average of 59.8% penetration[58]. And in terms of mobile network subscriptions the Nordic average penetration was in 2004 at 100.3%. Norway had in 2004 the second highest mobile subscription penetration among the Nordic countries with 103%. Sweden had 108% penetration of mobile subscriptions in 2004 which was the highest in the Nordic region[59].

Furthermore, the number of ICT-educated as share of population is also much lower in Norway than the other Nordic countries[60]. Following the Nordic intra-trade figures for 2004 ICT-trade, Norway has the highest Nordic import of ICT products form other Nordic countries, and also the second lowest export of ICT products to other Nordic countries[61]. Nevertheless, the Nordic telecommunications market is to a larger extent more influenced by Norwegian forces. This is obvious when looking at the ownership in the Nordic telecom sector. Telenor own mobile operations in both Sweden and Denmark, while NetCom is owned by TeliaSonera, which is a Swedish-Finnish company. This Nordic influence both in terms of ownership and in terms of import in the ICT/telecom sector, are also reflected in the Norwegian newspaper coverage of the telecom sector. As demonstrated in the analysis in

[55] SSB 2005:74 *(Nøkkeltall om Informasjonssamfunnet 2004)*
[56] SSB 2005:74 *(Nøkkeltall om Informasjonssamfunnet 2004)*
[57] SSB 2005:26 (*Nordic Information Society Statistics 2005)*
[58] SSB 2005:18 (*Nordic Information Society Statistics 2005)*
[59] SSB 2005:20 (*Nordic Information Society Statistics 2005)* Corresponding figures published by Post- og Teletilsynet place Norway at top with 104.1% mobile penetration followed by Sweden on 99.4% and Denmark at 96.2%.
[60] SSB 2005:117 (*Nordic Information Society Statistics 2005)*
[61] SSB 2005:136 (*Nordic Information Society Statistics 2005)* While the Swedish ICT sector exported for 1,952 million Euros to other Nordic countries, the Norwegian ICT sector only exported for 296 million Euros to other Nordic countries. However, Norwegian import mounted 1.152 mill Euros from other Nordic countries, which is over one fourth of the total import of ICT goods in Norway. In total Norway value of imports of ICT goods in 2004 were 3.2 times higher than the export (Nordic Information Society Statistics 2005:151).

chapter three, the Nordic/regional factor plays an important role in 3G reporting in Norwegian newspapers.

5.3.5 Norway in an international perspective

The Norwegian Information Society is considered to be among the ten most advanced in the world, following the Nordic region and Western Europe at large (IDC 2003)[62]. The EU-15 average mobile subscription penetration rate was in 2003 at 84.8% and the OECD countries average was 64.2%[63], and the average household Internet access in EU was 42% in 2004[64]. Norway is above the EU average both in mobile and Internet penetration, and also well above in terms of international standards as indicated by IDC's *Information Society Index* (Norway is placed 9th). This is well in tact with other Western European countries, however a bit behind Denmark, Sweden and Finland

.

5.4 The development of the third generation mobile network

The third generation mobile network (3G) is based on the International Telecommunications Union's IMT 2000 specification. There are three different technological platforms used in these 3G networks, and most operators use the Universal Mobil Telecommunication System-standard (UMTS). UMTS is a global standard and is also the standard used in the 3G networks in Norway and South Africa.

In order to use the new 3G networks, one must have a 3G adapted mobile phones and computers (using a 3G data card)[65]. 3G-networks have a higher capacity in terms of the speed of data transmissions than the existing GSM networks. The maximum download speed in this network is 384 kilobits per second, and the maximum upload speed is 64 kilobits per second.

---

[62] Of the 53 countries analysed, the four Nordic countries were all ranked within top nine. (Denmark 1st, Sweden 2nd, Finland 7th and Norway 9th.)
[63] SSB 2005:15 (*Nordic Information Society Statistics 2005)*
[64] SSB 2004:74 (*Nøkkeltall om Informasjonssamfunnet 2004)*
[65] For consumers the practical features and services related to the high capacity of 3G networks are plentiful and vary depending on the operator and service provider. One of the most emphasised features is the possibility of having high speed mobile Internet access through cell phones and computers. Video-telephony and streaming TV on the mobile phone are also features that 3G service providers will be able to offer consumer with a 3G phone. The 3G network will also provide operators with alternatives to overloaded GSM networks. The GSM networks (which are the 2nd generation mobile network) are often becoming to 'small' to handle the massive growth in traffic over mobile networks.

According to Telenor this is eight to ten times higher than the speeds offered in the GSM networks (Telenor *Mobil som modem*)[66].

5.5 The development of 3G in Norway and South Africa

Most 3G operators have bought licences to build and operate 3G networks from national regulative bodies. Different tactics were used in the sales and auctions of these licences. In some countries the licences were put on auction and the highest bidders were awarded a 3G license. This tactic, in some cases, drove the prices for a licence up to extreme amounts. The Norwegian and South African case however did not follow this example. In South Africa the 3G licences were given away for a symbolic amount of money, while in Norway these licences were given with a set of restrictions and responsibilities and prices were moderate compared to other western European countries.

The costs related to building out 3G networks infrastructure are generally high and demands a large investments. Nevertheless, whereas Vodacom were issued a 3G licence for six million Rand (equals 810 600 Euro) in South Africa, Telenor and NetCom had to pay 200 million Kroner (equals 26 million Euro) for a 3G licence in Norway. Both of these fees, however, are only small fractions of what some European 3G licences were priced at. Vodafone paid for example £6 billion (equals 9.143 billion Euros) for their UK licence alone[67]. On top of these licence-fees comes the actual cost related to the equipment and workload needed in rolling out 3G, and possible obligations following the licences.

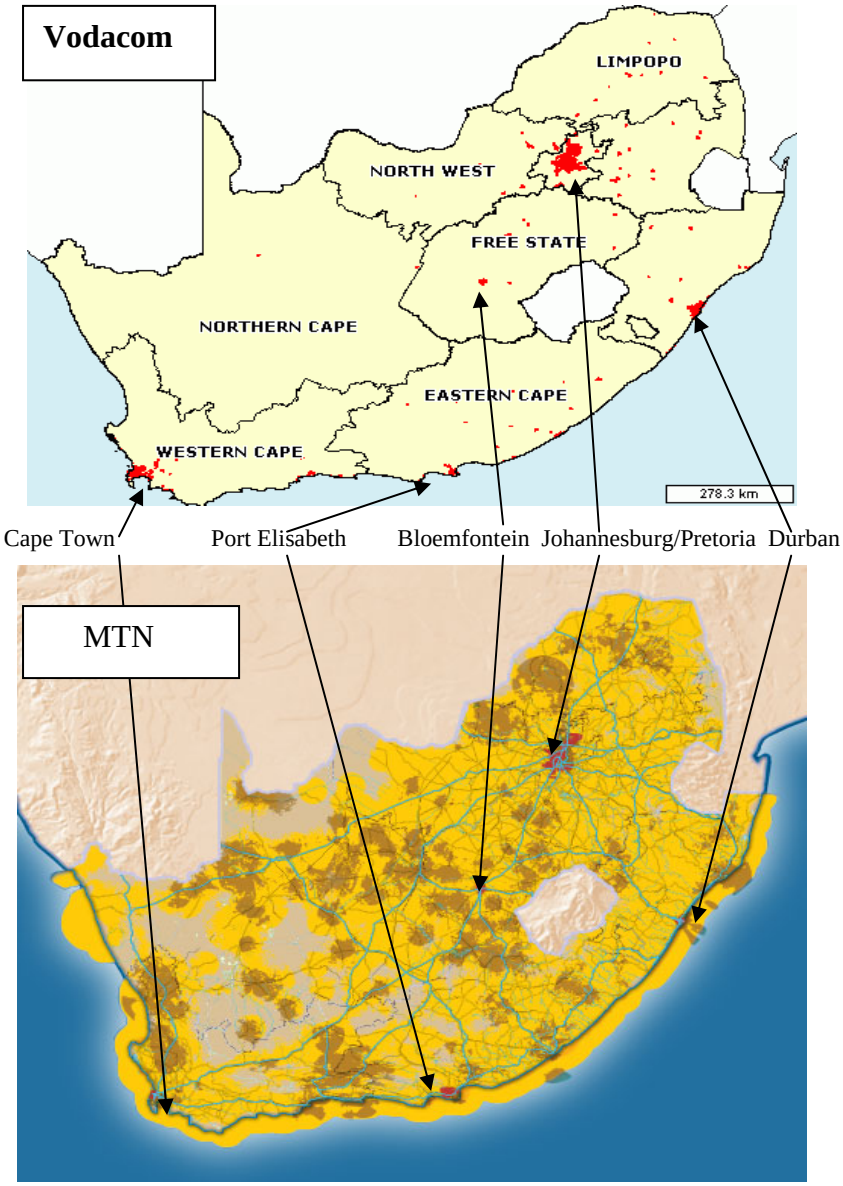
As the two charts below show the 3G coverage is limited to urban areas (areas marked with red indicate areas with 3G coverage), like Johannesburg, Pretoria, Cape Town, Bloemfontein, Port Elisabeth and Durban[68]. All the highlighted spots on the map correspond well with locations of major cities and other urban areas in South Africa. From an operator perspective

66 Nevertheless, many GSM networks are upgraded with a technology called Enhanced Data rates for GSM Evolution (EDGE) which provides data transmission speeds of up to 200 kilobits per second download rate up to 75 kilobits per second. One might say that the launch of commercial 3G networks is a step towards offering broadband speeds in a mobile network. The UMTS network has significantly lower capacity than the grounded fibre cable network. However, UMTS networks can be upgraded with High-Speed Download Packet Access (HSDPA) technology which increases the data transmission speed between 2.5 and 3.5 times. At the time of writing South Africa are among the few countries in the world that has upgraded the UMTS network with the HSDPA technology.

67 BBC (2004) 23rd August *South Africa sees future in 3G*

68 The two maps gives an overview of 3G coverage in Vodacom's network in May 2006, and the map of MTN's 3G network is from September 2006. The maps originates from the two operators own web sites.

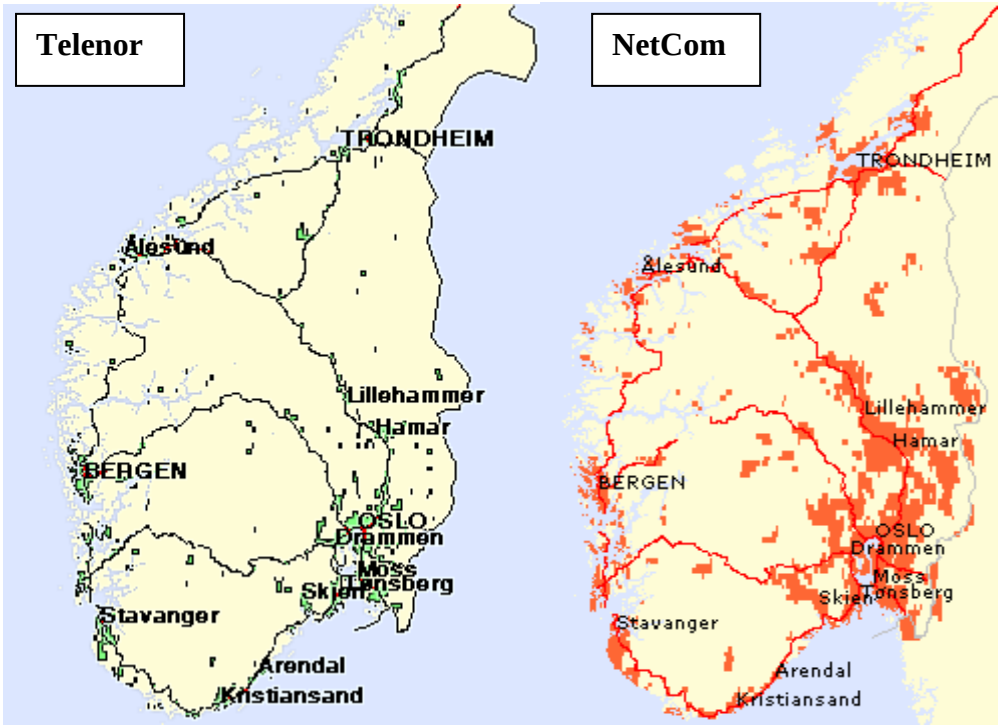
the rural areas are non-profitable in terms of the costs related to rolling out the 3G network. MTN, the second 3G operator in South Africa has more limited coverage, and has restricted their 3G services to fewer urban and metropolitan areas.



In Norway the 3G licences were issued according to obligations of vast geographical and population coverage. According to NetCom's licence their 3G network must cover 3.4 million people and 50 000 square kilometres within the first three years of the concession[69]. Telenor's corresponding obligations was set to 3.75 million people and covering a landmass of 75 500

[69] Norwegian Ministry of Transport and Communication *UMTS konsesjon NetCom*

square kilometres within the five first years of the concession[70]. The two maps below illustrate the 3G covered areas in southern Norway[71].



Norway and South Africa (and Latvia) share the 23rd place in terms of 3G launch date worldwide (3GAmericas 2006)[72]. South Africa had 1 ½ year after its 3G launch about 45 000 3G data card users (Business Day, 25th April 2006), a relatively low number in terms of penetration. Telenor alone had in the beginning of 2006 about 90 000 3G customers in Norway[73], which also is quite low compared to Sweden, South Korea and Japan.[74]

When framing the Norwegian situation in a European context, the 3G launch by Telenor in December 2004 lead Norway to be the 17th European country running a commercial 3G

[70] Norwegian Ministry of Transport and Communication *UMTS konsesjon Telenor ASA*
[71] The two maps are downloaded from Telenor's and NetCom's web pages
[72] The first commercial 3G network was deployed by DoCoMo in Japan in October 2001, over three years before Norway and South Africa.
[73] Of these 90 000 3G subscribers were 70 000 3G cell phone customers and 20 000 3G datacard customers. Corresponding figures on NetCom's 3G customers do not exist at the time of writing. NetCom has informed that they have missed on the marketing strategy on 3G, but will not release any numbers of 3G customers (digi.no on April 27th 2006).
[74] In contrast, Vodafone had since their 3G launch in November 2004, one month ahead of Telenor and Vodacom, gained 10 million 3G customers in 21 different countries by the end of March 2006 (Vodafone press release 16th March 2006)

network. Altogether, 32 European countries have opened 3G networks (per May 2006), this place Norway on the bottom half in terms of launch date so far.

The South African situation is quite different. Vodacom's 3G launch in December 2004 made South Africa the 2nd African country to deploy a commercial 3G network (Emtel opened their 3G services in Mauritius in November 2004)[75]. South Africa is also the only African country included on IDC's *Information Society Index*[76], and, ranked as number 34 (which means that South Africa's ability to access and utilize information and information technology is ranked 34 of the 53 largest IT markets in the world).

5.6 Summary

Key numbers on access to telecommunications indicate that Norway experiences a high level of teledensity. South Africa on the other hand is, in terms of teledensity, far above the African average, however, as Alison Gillwald indicates, a bit behind other comparable countries. The development within the ICT sector is also affected by digital divides in South Africa. As a result the South African society as one unit comes out poorly compared to Europe, North America, Oceania and parts of Asia.

In terms of the development of 3G the picture is reversed. Norway has been somewhat slow in developing the 3G networks compared the other Nordic and Western European countries. South Africa, on the other hand, has been on the forefront in African standards (even though the utilisation of 3G has been somewhat slow in South Africa.) The South African 3G operators MTN and Vodacom have also been among the first in the world to upgrade the UMTS-network to the HSDPA standard (while the Norwegian 3G operators have not yet decided whether to take any actions towards upgrading their UMTS-networks to HSDPA).

The emphasis on developing 3G networks in the urban and metropolitan areas of South Africa correspond well with other ICT-patterns in mobile ownership, fixed-line penetration and Internet access. All in all, the development of 3G then only confirms the fact that ICTs in

[75] These two countries and Nigeria are the only African countries running commercial 3G services (in May 2006).
[76] The index ranks the world's 53 largest IT markets' ability to access and utilize information and information technology. South Africa is the only sub-Saharan African country on the list of the 53 largest IT markets in the world.

South Africa seems highly concentrated around major cities and other urban areas. This trend is also seen in Norway, however, not as clearly as in South Africa. I will now move on to contextualise the South African and Norwegian media coverage of 3G with theoretical perspectives on the role of ICT in the Information Society.

Chapter six: Journalistic media in the Information Society

This chapter will focus on development and use of information and communication technologies, and place the findings from chapter three in this context. The increasing importance ICTs play for economies and societies are today well established. Manuel Castells, among several others, has manifested the significance of ICTs in the contemporary world. In Castells' view the role played by ICTs in contemporary societies is one of facilitating networking and the transmission of information (communication) unaffected by traditional boundaries such as time and place. And the impact this has on economic and social development seems unlimited. However, as Alison Gillwald notices, the development of this globally interconnected communications infrastructure - which changes economy and society - is highly uneven (Gillwald 2005:8). The following chapter will also pursue these tensions between the included and the excluded in the Information Society. Firstly, however, some perspectives on the term 'Information Society' will be discussed.

6.1 A critical approach to the term Information Society

Frank Webster argues that the prevalence of information in the present era - which is, amongst other factors, related to the increased volume of media and media products – is a characteristic feature of contemporary society (Webster 2002:22). New technology has changed the media landscape and facilitated convergence between traditional media and new technology into what is often referred to as 'new media'.

> There is simply a very great deal more information about than hitherto: perhaps most obviously in an explosion of media and media products (from cable TV channels to compact disk records, from mobile telephones to the Internet), but also importantly the rapid and accelerating permeation of computerized technologies throughout society, in the increased provision and take-up of education in most social systems, and in the growth of occupations that deal, for the most part, with information […]. (Webster 2002:22)

Webster argues that the term or the notion Information Society is for him of limited use because of both the inconsistencies and lack of clarity in distinguishing the Information Society. The imprecise use of the term information and the supposition of an Information Society undermines this term (Webster 2002). One of the problems with recognising an Information Society, as Webster sees it, is based on the method of how we quantitatively measure the Information Society. This is often based on high numbers of white-collar

workers, large percentage of GNP devoted to information etc (2002:23). On the contrary, there is nothing saying that a society with a low percentage of GNP devoted to information and few people occupied with informational work can't be considered as an Information Society (2002:27)[77].

Webster is sceptical to the notion of the Information Society, and argues that we will most likely not experience deep-seated social changes as a result of increased density of information and information technology. Nevertheless, he recognises that information can change the way we conduct our lives, but not at a point where the quantity of information is the decisive force (Webster 2002:23). Webster expands his critique of how the Information Society is being measured by questioning the determinist technological conception of the Information Society. He argues that it is not the expansion in technologies that define the Information Society. Technology is just another quantitative measurement and can not be regarded as driving society towards change (2002:28). To identify an Information Society as a new type of society that has emerged in the Information Age and which is defined by qualitative change, one cannot just look at how much information is in circulation or how many people work in information jobs etc (2002:27). What is new, according to Webster, is the 'Knowledge Society'. It is how we use information, how we construct meaning in information that is of importance here. Theoretical knowledge is now being used as foundation for technical innovation. In this way, information has created a new foundational principle of social life and can generate in modest social change, although he argues that this is not enough to call upon a new era, new times and an Information Age or an Information Society (2002:30).

Castells has also a critical approach to the term Information Society (Castells 2000:21). He argues that the term 'Information Society' is imprecise, and suggest using the term 'Informational Society' rather than 'Information Society' because this term: "indicates the attribute of a specific form of social organization in which information generation, processing, and transmission become the fundamental sources of productivity and power because of new technological conditions emerging in this historical period." (Castells 2000:21) This thesis,

[77] Webster argues that if a society has a minority of information experts and these few experts may hold decisive power, it is possible that the quantitative measure of people occupied in informational work would not qualify for Information Society status, but the decisive role these few information-experts holds in the power-structure of this society may create social change and would then qualify for an Information Society label. (2002:27)

however, has consequently used the term ‘Information Society’, The main argument for using this term is, as mentioned in the introduction to this thesis, because it emphasizes the role of information in societies. Moreover, that an academic approach to this term often relates to other – an often more precise – terms to describe different views on contemporary societies, such as: ‘knowledge society’, ‘network society’ and ‘informational society’. And ultimately, the term ‘Information Society’ is well established in many different fields, and can have an apparent descriptive function as to characterise important features in contemporary societies.

6.2 ICTs and social change

Leah Lievrouw (2002) characterises technological development as set of complex interactions between technical and social components: “They develop in dynamic environments where users, designers, manufacturers, investors, regulators, distributors and others work out their interrelated and competing interests, cultural assumptions, desires and visions.” (Lievrouw 2002:183) There is, according to Lievrouw, a constant tension between ‘determination’ and ‘contingency’ involved in this process (Lievrouw 2002:183). She explores this tension based on two different perspectives on new media technology and society[78]. These two differ in emphasis, but as Lievrouw comments:

> […] both contextualize technology relative to human action, social relationships and culture. Both examine the choices people make about technologies and, to differing degrees, both are concerned with the consequences and of technology adaptation and use. They also focus on information flow and communication relationships that foster new ideas and ways of doing things. (Lievrouw et al 2002:184).

Lievrouw considers many elements to be central in processes of technology development and concludes that it neither the deterministic or contingency approach is truly characteristic for these processes. Rather, her key argument when dealing with the moments development of

[78] Lievrouw uses two different perspectives when exploring the tension between determination and contingency, namely the *diffusion of innovation theory* (diffusion) and the *social shaping of technology* (SSP) perspectives. They both share common concerns and theoretical background, but differ in important aspects and therefore illustrate some crucial dynamics in this field of research (Lievrouw et al 2002:183-4). Within the diffusion theory several approaches can be taken. One is the network analysis and diffusion study, which also can have several points of entry. Another is based on the complexity of the networks, defined by the interactions between the actors within the network. Yet another point of entry could be approached by studying the externalities of the network and how the value of the network increases with its size (i.e. the telecommunications network). Another approach to diffusion studies could be a sociological/communication and economic theoretical approach. In this view the fundamental theoretical and analytical focus is on network structures and dynamics and assume that the relationship among social actors explain more about their actions than classifying actors according to their individual traits or characteristics (Lievrouw et al 2002:187) The diffusion of innovation theory is tough, no matter what point of entry, often criticised for being deterministic because it treats technology innovation as essential and focuses on effects or impact of innovations in social systems (Lievrouw et al 2002:187). In contrast, SSP studies seem to align more with the contingency approach (Lievrouw et al 2002:192).

new media is that this process is highly complex, multilayered and involves so many different groups and interests that it inhibits a pure 'determination' or a pure 'contingent' approach (Lievrouw 2002:195)[79].

Manuel Castells argues that the plurality of factors contributing to the course of technological development inhibits a determinist approach to technology. Rather;

> […] the ability, or inability of societies to master technology, […], largely shapes their destiny, to the point where we could say that while technology per se does not determine historical evolution and social change, technology (or the lack of it) embodies the capacity of societies to transform themselves, as well as the uses to which societies, […], decide to put their technological potential. (Castells 2000:7)

Castells further says that the current information technology revolution has originated not by accident, but because of the global restructuring of capitalism, however also resulting in different outcomes throughout the world. All these variations originate from historical, cultural and institutional differences, as well as the specific relationships to global capitalism and information technology (Castells 2000:13). According to Castells the relationship between technology and society is also defined by the role of the state. This is a decisive factor because the state can either promote or stall technological innovation within national boundaries:

> […] the state can be, and has been in history, […], a leading force for technological innovation; on the other hand, precisely because of this, when the state reverses its interest in technological development, or becomes unable to perform it under new conditions, a statist model of innovation leads to stagnation, because of the sterilization of society's autonomous innovative energy to create and apply technology. (Castells 2000:10)

Both Lievrouw and Castells express a complex picture of the interaction between societal components and development of technologies. In terms of mirroring dominating elements in the information society, journalistic media don't mediate a comprehensive understanding of the dynamics that govern such complex processes.

The analysis presented in chapter three shows that newspaper coverage of 3G has a strong financial and commercial orientation. Political involvements in the implementation of 3G

[79] Brian Winston has done research on more or less the same field as Lievrouw, although specifically on communication media. He notes that communication technologies have to be recognised as socially useful (a necessity) and properly invested in to realise them (Lister et al 2003:108). In this respect, both social and commercial interests play a vital role in new media development. This view on information technology development corresponds well with the picture drawn by Lievrouw.

have, in contrast, been scarcely covered in media. Only four articles (one percent) of the total 341 articles analysed, had a main focus on the political and regulative aspects of the 3G development. Both countries share this absence of politically oriented journalism related to the 3G roll out. Nevertheless, both countries have, as described in chapter five, active regulative bodies governing this development. This exclusion of such an important element in this development might have affected output in two ways. Firstly, important political discussions concerning licensing, network coverage areas and selection of standards are excluded from public scrutiny. Hence, public awareness on political activity becomes threatened. In a society highly dependent on the development of ICTs, the lack of attention on ICT decision-makers might prove risky. Media awareness towards important political issues is of great societal importance, also in democratic states as Norway and South Africa. One might therefore ask why journalistic media neglect such an important political field. Is it because the criteria governing political journalism do not correspond with the nature of political ICT decisions? Or, is it simply that few journalists possess the skills required to mediate issues concerning this rapidly changing technological environment and the political processes related to it? There might not be any specific reason for this. Rather, the point in this respect is highlighting the contradiction between a broader social context and journalistic media.

One might further argue that this contradiction might be extraordinary considering that in Norway - where in fact the vast majority of the population are heavily depending on ICTs both at their workplace, in schools and in their leisure time – newspapers do not follow the political decisions made on ICT development. Norway is generally rated high on Information Society Index's, this means that Norwegian decision makers must have done well in terms of supporting and promoting development of ICTs. Little credit is however given politicians and state employees in journalistic media.

This contradiction is also prominent when studying the South African newspapers coverage of 3G. The reader profiles of these newspapers, as described by ARPU, generally correspond well with patterns seen among groups using ICTs. Especially wealth and an urban situation favours both newspaper reading and ICT consumption. The same argument as for the Norwegian case therefore also applies to the South African case. And further, in a country characterized by large internal gaps and differences, including digital divides, the role of political decisions in developing ICT infrastructure is of great importance. It therefore also

seems like a contradiction that South African newspapers largely ignore such issues in their coverage of the ICT sector.

In conclusion, one might view the absence political dimensions in journalistic coverage of 3G as a symbol of the general lack of awareness towards a field relating to political decisions and technological development. In this respect, both Norwegian and South African newspapers equally overlook important societal dimensions.

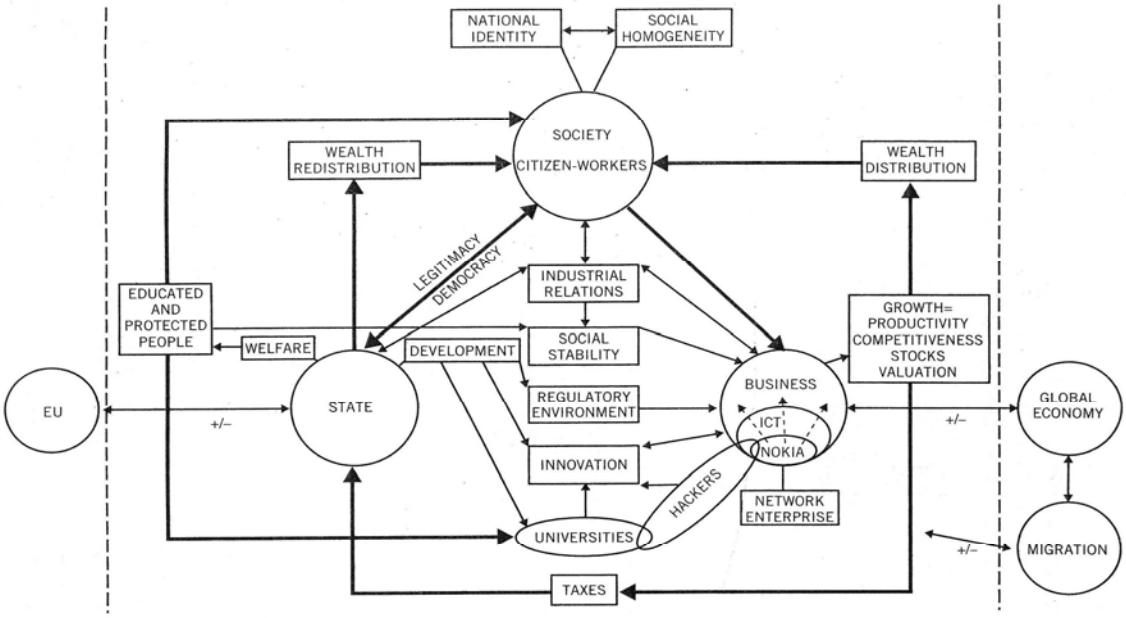
6.3 Complexity and multi-dimensional structures in the Information Society

The information society exists in a plurality of social and cultural models, but according to Castells & Himanen they all share some common structural features:

> […]it [the information society] is based on knowledge generation and information processing, with the help of micro- electronics based information technologies; its organized in networks; and its core activities are networked on a global scale, working as a unit in real-time thanks to infrastructure of telecommunications and transportation" (Castells & Himanen 2002:2)

Castells and Himanen have assessed the Finnish model of the Information Society. Although each feature of this model is based particularly on an analysis of the Finnish society, the model below highlights some general dynamics, relations and key elements in the Information Society.

Figure 6.1 Dominating features in the Information Society[80]



> At the heart of the Finnish information society model is a dynamic relationship between business and society, mediated by the state. What is critical in the model is the existence of dynamic feedback loops between its different elements […]. Thus, this is a self-reinforcing process that expands dynamically, if all interactions work in the predicted direction. (Castells and Himanen 2002:141)

As the figure shows, there are a multitude of factors involved when exploring the dominating forces in the Information Society. This plurality of factors and their interrelations forms the dynamics and structure of an information society. Each of these elements, moving from local communities to the greater framework set by national, regional and global determinants, has great impact on the development of Information Societies. The specific elements in this model is especially associated with the Finnish society, however, the larger structures such as the global economy, regional trade unions (such as the European Union and the African Union) together with national determinants such as the state, society, universities and businesses, can be considered as more universal features of Information Societies.

If we again look back at the analysis in chapter three, it is evident that many prominent aspects of the Information Society are neglected by journalistic media. According to the

[80] It is necessary to stress that this model is explicitly worked out to represent dominating features in the Information Society based on a Finnish model (Castells and Himanen 2002:142).

analysis only ten newspaper articles from each country focused specifically on technological issues related to 3G. All the innovative elements and the decision making happening outside of the business sector are given modest attention in the press. Whereas the political perspectives on 3G only dominated 1.2 % of the 3G related newspaper articles, the technology-specific perspective were prominent in 5.6% of these articles. And again, there are insignificant national differences between Norway and South Africa in this respect. These numbers are quite low compared to the business-specific coverage which was at 69% in Norway and 87% in South Africa. It was also significantly lower than the 23% consumer-oriented articles in Norway. In this thesis both consumer and business oriented articles are recognized by their primary focus on the commercial aspects of the 3G development. Consequently, political and technology-specific are characterized by a principal focus on non-commercial issues related to 3G[81]. The general absence political and technology-specific reporting does however not mirror the importance of such related factors in the roll out of 3G.

6.4 ICTs and networks

In his extensive literary work on the Information Age[82], Castells argues that the most significant feature in the shift from past to present is how both the economy as well as social and cultural life has somehow become organized around networks.

> Networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power and culture. While the networking form of social organization has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure. (Castells 2000:500)

Castells further says that despite the vast spread of the net, few are able to understand the logics, language and limitations of the Internet. The great speed of development within networking technology has made it difficult even for scientists to cope with the features of this development. And, journalistic media - that are eager to inform the worrying public, but at the same time lack the independent capacity to accurately analyse social tendencies – wave from one position to another in their reports of astonishing new technological facilities, only to end up diminishing in journalisms pitfall: only bad news is good news (Castells 2003:10).

[81] Non-commercial issues appearing in relation to 3G reporting was typically concerned with operator-licences, 3G network area coverage and debates over technological standards.
[82] Castells trilogy about the Information Age includes *The rise of the Network Society* (1996/ 2000), *The Power of Identity* (1997/ 2004), and *The end of Millennium* (1998/ 2000).

This brings us back to the core of my analysis. Both Castells and Bardoel (1999) argue that journalists lack the skills and knowledge to analyse and cope with these new technological features and new relations of society. Still, Bardoel says, journalistic media has a central role in creating a common orientation (Bardoel 1999: 390).

It may seem like the predictions made by Castells and Bardoel correspond well with the findings from my analysis. As demonstrated in chapter three, the dominating perspectives on ICT issues are placed in a business/economic context with strong focus on major companies within this industry. Secondary to this economical orientation is the consumer orientation (especially in Norway), which is highly focused on consumer goods and services. The deeper social consequences of technological development are not very well reflected in journalistic media. Neither are the political and technology-specific aspects of this development. And the common orientation Jo Bardoel talks about is then reduced to embrace little more than economical issues. Journalistic media has in this case created a highly commercial orientation, either directed towards readers within the business segment or readers whose wallet allows consumerism.

6.5 ICTs, inclusion-exclusion and digital divides

Castells takes his theory about the network society further when he argues that this networking logic induces a social determination based on the power of flows in these networks.

> Presence or absence in the network and the dynamics of each network vis-à-vis other are critical sources of domination and change in our society; a society that, therefore, we may properly call the network society, characterized by the pre-eminence of social morphology over social action. (Castells 2000:500)

Castells argues that presence in networks is further strengthening possibilities of participation in the global economy, which is: “organised around global networks of capital, management, and information, whose access to technological know-how is at the roots of productivity and competitiveness” (Castells 2000:502). Processes involved in this new economy is at large facilitated and structured by communication technology and services that have originated from the development in information technology. Accordingly, presence in these networks depend on the ability of each local or national economy to provide the material basis for participation, meaning that one must follow the development within ICTs in order to be

included in this new economy. The central position of ICTs in the global economy has also, according to Lister et al (2003:195), changed the operations of the new economic structure.[83] Furthermore, the development of ICTs facilitates new ways of networking among people, in their social lives and in all communities with very different cultures. Almost all societies in all parts of the world are somehow affected by the development of ICTs, either on micro levels in their local societies or through the macro structures dominating their cultures and nations. Nevertheless, the extent to which information and communication technologies are affecting peoples everyday lives are highly uneven and large parts of the world has not been included in this ICT revolution.

At the core of Castells' theory lies the inclusion/ exclusion paradigm, which also relates to the more frequently used term the 'digital divide'[84]. The digital divide relates to other factors such as education, workplace, age and social background which again affect the use and access to ICT on local and national level, and as Lister et al argues: "[…] the digital divide reproduces other kind of inequalities in society at large and has become a key site for debate about social inclusion." (Lister et al 2003:199) When measuring the general inequality in a society, the Gini Index is a useful tool.[85] Numbers from this index measures indicates that Norway, following the Nordic region at large, has a very low level of inequality. In contrast, South Africa, also following the Southern African region, has a very high level of inequality.[86] In fact, these two regions form the worlds largest gap measured in inequality,

[83] This change is rooted in several factors: firstly with the globalisation factor; internationalisation of business organisations, global standards of products and services and "an economy with the capacity to work as a unit in real time on a planetary scale" (Lister et al 2003:196). Secondly, a networked form of organisation in businesses has emerged as a result of ICTs. Thirdly, new communication and information technologies have facilitated more flexibility and fluidity in capital flows and thereby made businesses more competitive. Further, development of new markets and deregulation has generated in profit-based businesses. (Lister et al. 2003:195)

[84] The term 'digital divide' refers to inequalities in use and access to information and communication technologies in educational institutions and businesses on individual, local, national and global levels (SSB *Informasjonssamfunnet*). Or, as Sinikka Sassi says, the 'digital divide' can be interpreted as the ability of new technology to create significant social inequalities (Sassi 2005). Several surveys show that there is a distinct connection between wealth and the use and access to ICTs, both within wealthy nations as well as on a global scale (Lister et al 2003:199). Statistisk Sentralbyrå has done surveys confirming the link between income and use and access of ICTs within Norway. Nevertheless, as Tim Kelly argues, for South Africa it the term digital divide is somewhat misleading. She suggest that instead of using the term 'digital divide' one can rather - because of the rapid spread, falling prices, flexibility and adaptability of ICTs – use the word 'digital opportunities' (Kelly 2004:9)." The former is accurate, and it is possible to show the persistence of incontrovertible differences in level of access to ICTs, both within Africa and between Africa and the rest of the world. But the latter is more likely to attract investors, and is more in tune with what is currently happening in the region" (Kelly 2004:9).

[85] Inequality measures – The Gini index Measures the extent to which the distribution of income or consumption among individuals or households within a country deviates from a perfectly equal distribution.

[86] The Southern African region is here defined as consisting of Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. Figures from the Gini Index 2003 shows that in contrast to the Southern African region, the four Nordic countries measured are all in top 11 spots on the ranking

and therefore serve as good examples when discussing the underlying structures of the 'digital divide'. The inequality gaps in the Southern African nations also illustrate the informational gap within these countries. Uneven distribution of informational knowledge and technology in these countries is rooted in these differences, in the gaps in income and wealth. Though, when the general inequality is as explicit as in the South African nations, the information gap also becomes more evident and more significant. On a global scale however, the informational gap between rich and poor countries does not follow the same patterns as shown in the Gini Index, and in the case of Southern Africa. Rather, we experience opposite patterns. The lower they score on the Gini Index, the higher the rate of internet users and hosts is registered. In fact, the Southern African region had in 2003 an average of 257.7 Internet users- and 12.32 internet hosts pr 10 000 inhabitants. This is well above the respective figures for the African continent, which is 156.6 and 4.22.[87]

What seems to be the fundamental structure behind the 'digital divide' is the same factors that structure general inequality as measured in the Gini Index, either on local or global levels; income, wealth, education and other demographic trends such as urbanization and geographical distances[88]. It is an intricate play of different features, and they work as well for creating gaps on a national level as they do on a global scale (Lister et al. 2003:199). And further, as Castells says, the poor development of ICT in third world countries is critical because:

> Information technology, and the ability to use it and adapt it, is the critical factor in generating and accessing wealth, power and knowledge in our time. Africa is, for the time being, excluded from the information technology revolution, if we except for a few nodes of finance and international

(Denmark 2, Sweden 5, Norway 7 and Finland 11, Iceland is not included in this study). Whereas the Southern African region in general all countries (with the exception of Mozambique) are on the bottom of the list. In terms of regions we are here discussing the two extremes of the Gini Index, the Nordic region being the best and southern Africa the worst. (From the bottom of the list and upwards: Namibia 1st, Lesotho 2nd , Botswana 3rd , Swaziland 6th, South Africa 7th, Zimbabwe 12th, Zambia 18th, Malawi 24th)

[87] Similar figures for the Nordic region shows us that there are 5336.6 internet users and 2167.1 internet hosts pr 10 000 inhabitants (also well above the European average of 2426.53 and 280.84.) (ITU *Information technology numbers 2003)*.

[88] The effect of urbanization on the spread and use of ICT must not be underestimated. Manuel Castells and Pekka Himanen, among others, see this demographic trend as a driving force in the development of an Information Society. In their collaborative work *The Information Society and the Welfare State* (2002) (and also in Castells *The Rise of the Network Society*) they argue that metropolitan areas, in all countries, work as hubs in the Information Society. Information economy, innovation centres, education, business services, high-technology manufacturing tend to organize themselves around urban areas (Castells and Himanen 2002:104). This phenomenon is further established by Statistisk Sentralbyrå (*Internett-målinga, 3. kvartal 2005*) research on the field in 2004 showing that in the case of broadband (DSL/Cable) roll out, the metropolitan areas has over double the frequency of subscribers than the hinterlands.

> management directly connected to global networks while bypassing African economies and societies. (Castells 1998:92)

Castells further says that the most prominent obstacle for African countries to develop as information societies is rooted in the lack of basic infrastructure such as electricity and networking capability, which again relies on telecommunications infrastructure and network connectivity (Castells 1998:92).

South Africa both includes highly developed as well as highly underdeveloped communities and, as the studies conducted by Alison Gillwald show, the gaps in terms of use and access to ICTs follow not only the uneven wealth distribution, but is also related to a rural, urban divide. Castells says that metropolitan areas works as hubs which are connected to each other with the aid of new information and communication technology, thus creating a global network which can work simultaneously with most of its hubs (Castells 2001). The metropolitan-rural divide is a great challenge when moving towards an Information Society because it is of great importance for national and regional governments to stimulate growth of ICT infrastructure and services for the urban and financial areas. As a response to the 'digital divide' however, there will consequently be a danger of marginalising rural and poor areas, thus increasing the gaps and inequalities within the country/region[89].

As Castells shows with the geography of the Internet, ICT infrastructure largely follows existing patterns of urbanisation and metropolitan structures in most countries (Castells 2001:209). Hence, a metropolitan-rural divide exists not only in developing and underdeveloped societies, but also in highly developed societies. As section 5.5 of this thesis show, the geography of the 3G networks in Norway and South Africa corresponds well with this metropolitan-rural divide. And as Castells (2001) further says, the potential of metropolitan areas in terms of innovation includes the whole landscape of communication and information technologies and services. Everything from financial sector, insurance, consulting, juridical services, accounting, commercial and marketing businesses, which all make up the core activities of the economy, are all concentrated in metropolitan areas. And further that media, as well as entertainment, arts, fashion, publishing, museums and cultural businesses are also generally located in the same urban areas. This again attracts the educated

[89] In a study of the Information Society in Finland Castells and Himanen argues that the state must strive for a balance of local information societies connected to urban information societies in order to build a non-exclusive model of the Information Society (Castells & Himanen 2002).

people and the innovative forces in a country, thus further reinforcing the existing gaps between rural and urban areas (Castells 2001:215)[90]. When analysing the South African access to communication technologies and media, in light of the Living Standard Measures system, the table below might highlight and underpin some of the existing divides described by Castells.

Table 6.2 Living Standard Measures groups in South Africa[91]

LSM group	Cell phone penetration	Media access	Average monthly income in Rand	Rural/ urban	% of total population
1	0%	Radio (limited options)	905	rural	7,6
2	19%	Radio (limited options)	1094	rural	12,2
3	24%	Radio/TV (few channels)	1417	rural	13
4	35%	Radio/TV (few channels)	1870	N/A	14,9
5	40%	Radio/TV/weekly newspapers	2495	urban	13,5
6	51%	Radio/TV/daily-weekly newspapers	4207	urban	14,5
7	62%	Radio/TV/daily-weekly newspapers/Internet	6466	urban	7,1
8	72%	Radio/TV/daily-weekly newspapers/Internet	9247	urban	5,2
9	77%	Radio/TV/daily-weekly newspapers/Internet	11951	urban	6,4
10	88%	Radio/TV/daily-weekly newspapers/Internet	18955	urban	5,5

Denis McQuail (2000) discusses the role of media in bridging developmental gaps, such as the digital divide. He says that the role of mass media in a development perspective has often been viewed as one where media serve as agents for development by disseminating technological know-how and promoting the adoption and a consumer demands to many technologies (McQuail 2000:84). Nevertheless, as McQuail further says, this function of the media is limited by their dependence of infrastructure, high costs and their associative imperialist functions in developing countries (2000:84). When looking at table 6.2 further

[90] It is of importance here to note, as Rasna Warah (2006) argues, that digital divides are also prominent in major cities across Africa. She refers to the Nairobi slum and addresses this phenomenon as a 'divided city' where information poverty is a core fundament for reinforcing other excluding features in the third world.

[91] Table 6.1 is based on figures from 2005 published in SAARF *LSM presentation June 2006*. It is important to note that these figures represent the larger structures in South Africa and that personal and smaller demographical variations occur frequently. This table is not meant to be a deterministic classification system saying that people in LSM group 1-5 always live in rural areas, never access the Internet or don't read daily newspapers. The purpose is rather to highlight larger demographical trends within South Africa. Furthermore, it is also worth mentioning that these figures represent the year 2005 and thus corresponds with the time period of the newspaper analysis from chapter three. Nevertheless, cell phone penetration and Internet access numbers are changing rapidly and the contemporary situation might diverge from the one described in this thesis.

limitations come to light. First of all, the divide between the groups in terms of access to media and communication technology seems in this respect as more likely to increase the differences in access to technological information and know-how. As the analysis from chapter three illustrates, the South African newspapers that provide the most consumer related stories and technology specific articles about 3G are also newspapers which readers have the highest living standards, namely *Business Day* and *Cape Argus* [92] (see also appendix one). Furthermore, South Africans that access newspapers are in general also people who access other information sources and ICTs. An effect of this might be that journalistic media in this case are reinforcing the digital divides rather than bridging them.

The Norwegian newspapers had in one fourth of their 3G reports a dominating international orientation, however, not one single story was concerned with issues relating to the digital divide and the inequality in access and use of ICT on a global scale. By neglecting to highlight digital divide issues, newspapers impede their reader's valuable insight and awareness on fundamental developmental issues. In general one might say that the issues raised when reporting on the global development of ICTs is predominantly related to ICT conferences and exhibitions, developmental trends in high-end markets like Japan and South Korea, and other ICT issues happening in the forefront of the technological evolution. The role of ICT in bridging developmental gaps, the situation of those left behind the ICT revolution and the many negative impacts of this development are not considered in Norwegian newspapers. They are, as mentioned above, predominantly occupied with covering the financial and consumer related aspects of the ICT revolution. This trend is not as prominent in South Africa where almost ten percent of the 3G related articles also addressed digital divide issues, however on a secondary level.

6.6 Summary

The contemporary world is increasingly affected by the rapidly changing technological environment. In the past few decades information and communication technologies revolutionised the global economy, Information Societies have risen and people's daily lives are now in all forms highly affected by ICTs and political agendas are increasingly focused on the role of ICTs as a vital tool for development. Nevertheless, many people, societies and

[92] According to Cape Argus readership profiles, about 71% of their readers are in LSM groups 7-10. Business Day is the South African newspaper with the highest average income in terms of readership households (SAARF 2005 *Industry Presentation On The SAARF Universal LSM 2005RA*).

nations have yet to benefit from the ICT revolution. When viewing the findings from chapter three in light of an ICT -and society context, there are three prominent characteristics that are worth emphasizing. Firstly, the impacts ICTs have on the economy are, as highlighted by Castells (2000), deep rooted and revolution like. In this respect ICTs function as facilitators for enhanced interactivity, communication and networking of businesses on local, national and global scale. And further, the ICT-industry is a prominent actor in most financial markets and on stock-exchanges worldwide. In terms of media coverage, the analysis from chapter three show that – in the case of the 3G network – journalistic media is overwhelmingly concentrated on this part of this economical side of the ICT industry.

Secondly, as the role of ICTs in society and economy is escalating, the importance of political initiatives directed towards ICT development also increases. The course of ICT development is determined by an intricate play between various innovative forces, educational institutions, businesses, investors, and also the political framework set by the regulative bodies related to this sector. In light of this, it is interesting to observe that there is - in most newspapers analysed in this thesis - an absolute ignorance towards the political elements that shape ICT policy and the substance of these political frameworks. If we again consider Brian McNair's argument - that journalism can shape the environment within which events and issues are viewed as important by making them visible to the public (McNair 1998:49) – one might say that important features in ICT development is excluded from public awareness because it is not considered as important by journalistic media.

Thirdly, the ICT revolution has also increased existing gaps between the third and the first world. Rasna Warah argues that developmental initiatives has been 'informationalised' (meaning that knowledge and information can be a factor improving life conditions), and she further states that: "Information and communication technologies (ICTs) are now seen as the key to economic development and tools for political empowerment that can transcend traditional North-South, rich-poor divisions" (Warah 2006:101). In terms of creating awareness towards the digital divide, Norwegian and South African newspapers are somewhat different. In the Norwegian case none of the newspapers highlighted this issue, while in South Africa there was a limited focus on ICTs in a developmental/ digital divide perspective. Nevertheless, the overall dominating newspaper perspectives on ICTs do not highlight issues concerning digital divides. The following part will also include summarising some of the most

important arguments posed throughout this thesis, as well as make a few conclusive attributions to these.

Chapter seven: Conclusions

This chapter aims to gather the main arguments posed throughout this thesis, and further add conclusive remarks on how journalistic media mirror the Information Society in Norway and South Africa. The results of this thesis clearly indicate that the economical aspects related to ICTs are the most prominent features reflected newspaper coverage of ICT issues. Nevertheless, it is important also to also highlight the differences between business oriented and non-business oriented 3G related articles because a significant part of newspaper readers might not read the economic sections or business articles in newspapers. The first part of this chapter will deal with differences between business oriented and non-business oriented 3G reports and seek to explore what kind of technological awareness newspapers create within these two bulks of journalism[93]. Secondly, this chapter will forward a three folded conclusion that seeks to answer the research question posed in the introduction.

7.1 Creating technology awareness through newspapers

As chapter three illustrated, common ways of reporting on 3G in newspapers have four different orientations, and the informative aspects related to the 3G technology varies within these categories. When reporting on a relatively new technology such as 3G, it is important to provide some basic background information and contextualising in order to make the communication with the reader 'successful'[94]. Using the word '3G' without explanation and further elaboration might be confusing for a non technology-aware reader, it is therefore important to provide some information about what the this new technology is and how it can transform into something useful. When again moving back to the findings from chapter three, one can note that only 22% of all Norwegian articles mentioning 3G also included an

[93] By non-business oriented articles I refer to all articles in the three categories consumer, political and technology-specific. I have made a distinction between business oriented and non-business oriented articles because this is where the newspapers included in this study most significantly deviates from each other. Firstly because there is a distinction between pure economy newspapers - such as *Business Day*, *Business Report* and *Dagens Næringsliv* – and all other newspapers included here. And secondly because business news often comes in separate sections of newspapers and thus can easily be ignored by readers who basically are interested in the other sections of the newspaper.

[94] In McNair's view, a successful (effective and powerful) communicative process between journalist and readers depends on trustworthiness of the source of a message (broadsheet, tabloid, TV-news, internet etc), the efficiency of the communicated content (language) and other contradictory information available to the reader originated form education, other media etc (1998:43).

explanation of what this technology is and how it can be used. In South Africa this rate is higher, about 33% of the articles mentioning 3G also seek to explain this technology[95].

On a more detailed level it is worth noting that one third of the Norwegian consumer related articles, and about 70% of the technology-specific articles, sought to explain the 3G technology. In contrast, only 14% of the Norwegian business oriented articles included an explanation about 3G. This clearly indicates that the type of journalism directed towards the non-business segment of the Norwegian readership is more frequently seeking to pose a basic understanding of this 'new' technological phenomenon. In South Africa about 42% of the consumer related articles provided such explanation, and only 30% of the technology-specific articles. If we specifically look at the Norwegian all non-business oriented articles together – the consumer, political and technology-specific categories - almost 39% of the articles included explanations about the 3G technology. In South Africa, 33% of these non-business oriented articles included a 3G-explanation, interestingly, the same figure as for the business oriented 3G articles. While the South African newspapers more often provide technological explanations about 3G, the distinction between the business-segment and the other segments are far more evident in Norwegian newspapers.

It is also worth highlighting which features 3G is associated with in terms of areas of use and practical features related to this technology. I have in the table below made a distinction between four categories that is in focus when newspapers provide information about functions of the new 3G network. Firstly, newspapers see 3G as a gateway to mobile Internet and as providing access to mobile e-mail. This association relates to well established applications. Secondly, 3G is viewed as a network that enables people to watch TV and videos on their mobile phone, mostly portrayed as an entertainment application by newspapers. Thirdly, the 3G network facilitates a new communication form, video calling. Many newspapers saw this as a very exiting feature during the implementation period and several tests were conducted. The fourth category was a traditional text-based service, namely reading the latest news, sports and weather on the mobile phone. Table 7.1 below shows what newspapers in Norway (N) and South Africa (SA) associated 3G with from June 1st 2004 to December 31st 2005.

[95] In this analysis I also considered whether the number of 3G explanations declined with time due to raised awareness about 3G as the technology were being implemented in the two countries. The result, however, indicates that there is no connection between the frequency of 3G explanations in newspapers articles and the timeline of 3G presences in the two countries.

Table 7.1 Mobile services associated with 3G technology in newspapers.

3G association	All articles		Business articles		Non-Business articles	
	SA	N	SA	N	SA	N
Internet/e-mail	31%	15%	31%	6%	29%	35%
TV/Video	26%	22%	23%	15%	42%	37%
Videocall	25%	14%	27%	3%	13%	39%
News/Weather/Sports	10%	11%	9%	5%	17%	27%

(SA=South Africa, N=Norway)

There are actually only three significant differences between Norway and South Africa in this respect, two of which can be related to the Norwegian business oriented articles. Firstly it is very few Norwegian business-oriented newspaper articles that focus on the new mobile services enabled by the 3G network. Secondly, the low rate of the two categories Internet/e-mail and Videocall in Norwegian newspaper might seem remarkable because both these categories are often highlighted as a useful tool for businesses in South African newspapers. The third, and most prominent, difference between Norway and South Africa relates to how newspapers portray 3G in business oriented versus non-business oriented articles. In South Africa the 3G technology is quite often associated with new mobile services, both in business oriented articles as well as in non-business oriented articles. There are not large deviations between how newspapers portray 3G to readers in the business segment than in the non-business segment. In contrast, the Norwegian newspapers have a very different approach to 3G when framing it in a business fashion than in a non-business fashion. As table 7.1 indicates, the Norwegian non-business oriented articles - the consumer oriented, politically oriented and technology-specific articles – are very different from the business oriented articles in that they address 3G as something bringing about new mobile services for the average consumer or citizen. When written in a business oriented style, 3G is often subjected without being associated with any new mobile services or as having practical functions.

There is another difference between Norwegian and South African 3G reporting I wish to highlight before drawing any conclusions to whether newspapers can contribute to create greater technology awareness among their readers. Within the South African business oriented 3G reporting a strong focus is placed on consumer issues such as pricing for mobile services and reliability of networks, etc. As much as 38% of all South African business

oriented 3G related articles also addressed consumer issues[96]. The corresponding Norwegian figure was 17%. We can draw from this that while consumer issues are frequently treated as a major subject in Norwegian newspapers it rather takes form as secondary issues in business reporting in South African newspapers. In terms of creating awareness towards consumer rights and mobile phone rates etc, South African newspaper readers who read business newspapers and business reports on 3G will ultimately have more access to technological know-how through newspapers than people who read the non-business oriented reports. This is opposite to the Norwegian situation where most consumer information about 3G is found in the non-business oriented reports.

About 40% of South Africans read newspapers regularly, and almost three quarters of Norwegians read newspaper on a daily basis[97]. In both countries newspapers draw a significant amount of readers, and one might say that the reader environment is large enough for newspapers to function as creators of a common awareness, as Jo Bardoel (1999) expresses it. In terms of what kind of awareness they create towards information and communication technologies, the examples above indicate that this is highly variable and comes with some implications. When divided into two bulks, business oriented and non-business oriented, the example show us that South Africans who read business articles are heavily exposed to information about 3G in general, as much as 87% of all articles mentioning 3G were business oriented. And, people who read these business oriented articles about 3G also access much information on consumer issues relating to new mobile services. Furthermore, of all non-business oriented articles published in the six South African newspapers included in this study, *Business Day* and *Business Report* alone represent 70% of all technology-specific reports on 3G, 100% of the politically oriented reports and 8% of the consumer oriented articles. So ultimately, South African newspaper readers that do not follow business oriented reports are left with – except for a few technology oriented articles – a small cluster of consumer perspectives on 3G. Consequently, the technological awareness raised by newspapers in South Africa is almost one dimensional and both directed towards, and centred around the business aspects of the 3G technology.

[96] Among the 183 South African 3G related newspaper articles included in this study, 159 had a dominating business perspective and 60 of these also included consumer issues. In contrast, only 12 articles had a fully dominating consumer perspective.

[97] Numbers are gathered form SAARF (2005), *Mail & Guardian* 29th September 2004 *Don't read to much into race and readership* and MedieNorge (2005) *Avislesning en gjennomsnittsdag*. One must note that the daily readership of newspapers are 21%, however, this rather low level of daily readership suffer from the fact that the most widely read newspapers in South Africa are weekly papers, especially the weekend newspapers have high readerships.

The Norwegian situation is somewhat different, mostly because almost on third of all articles about 3G are written in a non-business oriented fashion. These non-business oriented articles provide both different perspectives on -and different information about 3G than business oriented reports. Nevertheless, one must bear in mind that the overall perspective – in two thirds of the cases - is characterised by a strong focus on the business aspects of the 3G technology. And further, that in the Norwegian business oriented reporting we find less non-business related-, consumer –and mobile service related information than in South Africa.

When comparing the perspectives given on 3G in Norwegian and South African newspapers, one can conclude that both are highly focused on business matters. Nevertheless, while the Norwegian newspapers also have a strong focus on consumer stories as an own genre within newspapers, the South Africa newspapers rather include consumer issues as secondary themes in otherwise business dominated articles[98]. If newspapers can contribute to create awareness towards the 3G technology, it is very much directed towards either an economically interested reader group, or towards readers with high consumer potential. This is underpinned by the fact the largest amount of 3G related articles are found in business newspapers and business oriented articles in South Africa and Norway. And also, the newspapers where the average newsreader possesses great consumer-potential will have a solid foundation for consumer reporting. This is also underpinned by a tendency found among the South African newspapers where one can see that the focus on consumer issues related to 3G rises with the wealth of the newspapers' readerships (see footnote 92). Conclusively one might say that, in a rich society, like Norway, every newspaper reader is a consumer with income to spend. In society like South Africa, where wealth is less evenly distributed, consumer issues are found in the papers read by the richer segments; the business papers.

I will now move over to the ending section of this thesis. This following part will seek to generalise the findings previously discussed in this thesis, and will primarily focus on three

[98] In Business Day one can clearly see a tendency towards a consumer focus as a secondary theme or issue as a supplement to business oriented stories. Business Day, which is the South African newspaper with the reader group with the highest average income, is also the newspaper most frequently addressing consumer issues. In contrast, City Press, which has the lowest income group as readers, has no articles addressing 3G (SAARF *AMPS 2005*). In fact, of the six South African newspapers included in this study, the focus on consumer issues related to 3G rises according to average income among the readership (SAARF AMPS 2005). In terms of the Norwegian case the connections between wealth of newspapers readership and consumer reporting was not pursued because in Norway newspaper readership in general does not follow any specific socio-economical variations (Statistisk Sentralbyrå *Survey on Culture and Media Use* 2003:125).

main conclusive approaches to what newspaper coverage of 3G are telling us about the Information Society in Norway and South Africa.

7.2 Three main conclusive remarks

Throughout this thesis I have sought to assess how journalistic media mirrors important features of the Information Society. When approaching this subject I have tried to make this task comprehensible by taking a few narrowing tactical moves. One is that I have concentrated the journalistic media to only embrace newspaper journalism. Furthermore, since the Information Society is founded on a multitude of factors, I have chosen to focus mainly on ICTs, which many argue is the core foundation of the Information Society. Following this, I have conducted a case study centred around the development of the third generation mobile network (3G) and how it has been portrayed in newspapers. And, I have also chosen to study only two countries and a total of eleven newspapers. The two countries are highly different, yet comparable, and represent both a society developing towards an Information Society, and a society already considered as highly information dense. Furthermore, I have approached this case study using a combination of methodologies, including a variation between qualitative and quantitative measures and a grounded theory approach. Finally, an analysis of 341 newspaper articles - all containing the keyword '3G' – was conducted. The findings of this analysis has functioned as a point of reference throughout this thesis, and when summarising the most important aspects dealt with during these nearly hundred pages, three main conclusive remarks should be made.

Newspaper coverage of 3G is highly dominated by economical perspectives. Two prominent findings from the analysis in chapter three reflect this. The first relates to newspapers types and tells us that 3G is extensively more frequently issued in business newspapers - such as Business Day, Business Report and Dagens Næringsliv – than in other newspapers. And also, business oriented views on 3G dominate in almost nine out of ten South African articles and in over two thirds of the Norwegian articles. Nevertheless, there is an apparent difference between the two countries in this respect. If we overlook the massive contribution of articles from the three business newspapers, a distinct difference between Norway and South Africa comes to light. The four South African non-business newspapers - Cape Argus, City Press, Sunday Times and The Mercury - all have an economical orientation in their coverage of 3G issues. In, contrast, of the four Norwegian non-business newspapers - Aftenposten, Bergens Tidene, Dagbladet and Dagsavisen - only one, Aftenposten, had a dominant economical focus

on 3G in their reports. So, while all newspapers in South Africa are mainly focusing on economical aspects related to 3G, most Norwegian newspapers actually focus on another industrial aspect of the 3G technology; consumer issues.

The persons, companies and institutions that appear in newspaper reports on 3G are almost exclusively subjects with economical interests in this technology. The non-commercial players in this industry are almost without exception not represented in newspaper articles about 3G. As chapter three indicated, there are two indicators confirming this trend. When studying whose quoted and referred to in the newspaper articles, people connected to telecom companies and other related industrial players is cited as sources in almost two thirds of all the Norwegian articles, and well above three quarters of the South African articles. Furthermore, a brief assessment of press release penetration in 3G related articles also indicated a strong industrial influence on journalistic sources. In this case I studied how many of the 3G related press releases from Telenor, NetCom, MTN and Vodacom who actually generated journalistic coverage. I found that up to almost three quarters of telecom companies 3G related press releases was used as sources in newspaper articles. In contrast to this overwhelming concentration of industrial influence on 3G reporting, political sources were referred to in only three percent of the South African articles and in six percent of the Norwegian articles. Furthermore, independent sources from other technological institutions and organisations were only referred to in two South African articles and in four Norwegian articles. Altogether, the sources that newspapers refer to when reporting on 3G issues are extremely skewed towards commercial players. Ultimately, a consequence might be that people only associate 3G with these commercial players.

Newspapers neglect many important aspects when covering ICT issues and might contribute to reinforce exciting inequalities in an Information Society. This third point also relates to the main question raised in the introduction to this thesis. When approaching this question it is perhaps equally interesting to highlight what newspapers are not covering than what is actually covered. Newspapers, obviously, neglect the political aspects, and often also technology-specific aspects, related to the development of 3G. Focus is rather placed on industrial matters and takes form as either consumer oriented or, preferably, business oriented stories. If we allow ourselves to generalise these findings, ICTs are covered in a way that many important drivers in the Information Society never become part of people's technological awareness. Ultimately, the way newspapers cover important features in the

Information Society can, I would argue, reinforce existing inequalities by not focusing on important political and technological issues concerning the Information Society, people's awareness about these matters become undernourished and important decisions are taken without public participation and scrutiny. And further, when newspapers are covering dominant features in Information Societies, it is done in a fashion that favours people who are already within information networks, thus further excluding people outside these networks.

One can summarise the main findings of this thesis by repeating that it is almost exclusively the economical aspects and interests that are visible in newspapers reflection of the Information Society. Other important features are invisible in this journalistic coverage, thus creating a narrow common awareness towards the driving forces in the Information Society. And ultimately - as this thesis has showed that journalistic media has almost a one-dimensional perspective towards issues relating to the Information Society – it will be appropriate to call for more diversified journalistic coverage of these important dimensions in contemporary societies. Further, more theoretical considerations can be raised towards the function of journalistic media in building common awareness and knowledge about ICT and the important features of the Information Society. And also, as the technological environment is rapidly changing, the theoretical perspectives on this field need to be continually fuelled to keep pace with development. Perhaps will also Castells' contributions to this topic soon prove inadequate as the structures in the 'Network Society' is changing with the increased mobility of ICTs and the expansion of mobile technologies in rural and under-developed parts of the world.

Bibliography:

3G Americas (2006), *HSDPA fact sheet*
http://www.3gamericas.org/pdfs/hsdpafactsheet.pdf [1st September 2006]

3G Americas (2006), *Global UMTS operator status*
http://www.3gamericas.org/PDFs/umts_worldwide.pdf [1st September 2006]

Aftenposten (online edition) April 26th 2006

Aftenposten (print edition) October 24th 2004

Allern, Sigurd (2001), *Journalistiske og kommersielle nyhetsverdier – nyhetsbedrifter som institusjonsforvaltere og markedsaktører* Paper til den 15. nordiske konferansen for medie- og kommunikasjonsforskning, Reykjavik, Island.

Bardoel, Jo (1999) *Beyond journalism: A profession between Information Society and Civil Society* in Tumber, Howard (ed) (1999) *News: A Reader* Oxford University Press, Oxford & New York

BBC (2004) 23rd August *South Africa sees future in 3G*
http://news.bbc.co.uk/2/hi/business/3576260.stm [17th October 2006]

Business Day *Reader Profile*
http://www.bdfmmedia.co.za/reader_profile.asp visited [21st March 2006]

Business Day (online edition) 25th April 2006

Castells, Manuel and Himanen, Pekka (2002) *The information society and the welfare state – The Finnish Model* Oxford University Press, UK

Castells, Manuel (2001) *The Internet galaxy: reflections on the Internet, business, and society* Oxford University Press, Oxford, UK

Castells, Manuel (2000) *The Rise of the Network Society*, 2nd ed. Blackwell Publishers, Oxford, UK

Castells, Manuel (1998) *End of Millennium* Blackwell Publishers, Oxford, UK

Corbin, Juliet & Holt, Nicholas L. (2005) *Grounded Theory* in Somekh, Bridget & Lewin, Cathy (2005) *Research Methods in the Social Sciences* SAGE Publications Ltd, London, UK

Digi.no April 27th 2006 *NetCom lover lavere 3G-priser til høsten*
http://www.digi.no/php/art.php?id=301263 [18th October 2006]

Eriksen, Anders R. (2005) *Replikk til Urszula Srebrowskas artikkel 'Atekst kan lede på villspor'* in Norsk Medietidsskrift årgang 12 nr. 1

Eriksen, Thomas Hylland (1997) *Du, deg og ditt* in Finslo, Stig; Korme, Christine; Njaastad, Olav (1997): *Kvalitet i journalistikken : er vi gode nok?* Institutt for journalistikk, Fredrikstad

Gillwald, Alison & Esselaar, Stephen (2004) *South African 2004 ICT Sector Performance Review* LINK Centre Public Policy Research Paper No 7, LINK Centre, University of the Witwatersrand, Johannesburg.

Gillwald, Alison (ed.) 2005 *Towards and African e-Index – Household and individual ICT access and usage across 10 African countries* The Link Centre, Wits University School of Public and Development Management, South Africa.

IDC (2003) *Information Society Index*
http://idc.com/groups/isi.main.html [20th April 2005]

International Telecommunications Union *SAT-3 cable information*
http://www.itu.int/ITU-D/partners/Events/2004/Kampala_Oct-Nov04/Presentations/1_JP-Meyer.ppt#4 [3rd September 2006]

International Telecommunications Union (2003) *Information technology numbers 2003*
http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet03.pdf [3rd September 2006]

International Telecommunication Union *What's the state of ICT access around the world?*
http://www.itu.int/wsis/tunis/newsroom/stats/index.html [16th September 2006]

Kelly, Tim (2004) *Changing ICT Rankings of African Nations* in *The Southern African Journal of Information and Communication*, Issue No 5. Learning Information Networking and Knowledge (LINK) Centre, Graduate School of Public and Development Management, Johannesburg South Africa

Lister, Martin & Dovey, Jon & Giddings, Seth & Grant, Iain & Kelly, Kieran (2003) *New Media: A Critical Introduction* Routledge London and New York

Lievrouw (2002) *Determination and Contingency in New Media Development: Diffusion of Innovations and Social Shaping of Technology Perspectives* in Lievrouw, Leah A. and Livingstone, Sonia (editors) (2002) *Handbook of New Media: Social Shaping and Consequences of ICTs* SAGE Publications, London, UK

Livingstone, Sonia (2003) *On the Challenges of Cross-National Comparative Media Research* Published in European Journal of Communication, SAGE Publications, London

Mail & Guardian (online edition) 29th September 2004, *Don't read to much into race and readership*
http://www.mg.co.za/articlePage.aspx?articleid=138370&area=/insight/insight__conv erse/ [21st March 2006]

Mattelart, Armand (2003) *The Information Society – An introduction* SAGE publications, London, UK

McManus, John H. (1994) *Market Driven journalism – let the citizen beware?* SAGE Publications, USA

McNair, Brian (1998) *The Sociology of Journalism* Arnold Publishers, London

McQuail, Denis (2000) *Mass Communication Theory - 4th edition* SAGE Publications, Great Britain

Mediebedriftenes Landsforening (2006) *Avisopplag 2005* http://www.mediebedriftene.no/index.asp?id=52072#52072 [3rd September 2006]

MedieNorge (2004) *Største Norske Avisselskap* http://www.medienorge.uib.no/Main.cfm?ID=188&Medium=Avis&vis_resultat=YES) [5th September 2006]

MedieNorge (2005) *Avislesning en gjennomsnittsdag* http://www.medienorge.uib.no/?cat=statistikk&page=avis&queryID=185 [26th September 2006]

Morley, David 2003. *What's Home Got To Do With It?: Contradictory dynamics in the domestication of technology and the dislocation of domesticity*, European Journal of Cultural Studies 6(4): 435-458.

MTN *3G coverage map* http://www.mtn.co.za/default.aspx?pid=11789 [30th May 2006]

MTN 2006, *Company operations and profiles*: http://www.mtn.com/mtn.group.web/footprint/overview.asp [1st September 2006]

MTN 2006, *Press Room* http://www.mtn.co.za/?pid=9522 [1st September 2006]

Muller, Johan; Cloete, Nico; Badat, Shireen (2001) *Challenges of globalisation- South African debates with Manuel Castells* Maskew Miller Longman Ltd Cape Town

NetCom *3G coverage map* http://dekning.netcom.no/ekstratynn/?version=2&kommune_id=kommundenavnl [18th October 2006]

NetCom *Press Center* https://netcom.no/omnetcom/pressesenter.html [18th October 2006]

Nokia *Annual Report 2003*

Nokia *Annual report 2004*

Nokia (2006) *Press releases, Norway* http://www.nokia.no/about/press/pressreleases.php [1st September 2006]

Nokia (2006) *Press releases Africa*

http://press.nokia.com/pr2006_2.html [1st September 2006]

Nordic council of Ministers (2005) *Nordic Information Society Statistics 2005* http://www.norden.org/pub/uddannelse/IT/TN2005562.pdf [27th September 2006]

Norwegian Ministry of Transport and Communication *UMTS konsesjon: NetCom* http://odin.dep.no/sd/norsk/dok/andre_dok/konsesjoner/028021-990015/dok-bn.html [17th October 2006]

Ministry of Transport and Communication *UMTS konsesjon Telenor ASA* http://odin.dep.no/sd/norsk/dok/andre_dok/konsesjoner/028021-990013/dok-bn.html [17th October 2006]

Post og Teletilsynet *Nyttig å vite om mobiltelefoni* http://www.npt.no/portal/page?_pageid=121,47463&_dad=web&_schema=PORTAL&p_url=http%3A//www.telepriser.no/forbrukerinfo_mobil.do%23skifte [18th September 2006]

Post-og Teletilsynet (2006) - *Press release* published on January 5th.

Sassi, Sinikka (2005) *Skapar nätet ojämlikhet?* Article published in Carlsson, Ulla (ed) *Nordicom Information 1/2005* http://www.nordicom.gu.se/?portal=mr&main=info_publ2.php&ex=168&me=1& [4th September 2006]

South African Advertising Research Foundation (SAARF) (2005) Living Standard Measures, *LSM Presentation June 2006* http://www.saarf.co.za/ [11th September 2006]

South African Advertising Research Foundation (SAARF) (2005) *Industry Presentation On The SAARF Universal LSM 2005RA* http://www.saarf.co.za/ [11th September 2006]

South African Department of Communications *Annual Report 2005/2006*

South Africa Yearbook 2003/2004

Srebrowska, Urszula (2005) *Atekst kan lede på villspor* article published in Norsk Medietidsskrift årgang 12 nr. 1

Statistisk Sentralbyrå *Informasjonssamfunnet* http://www.ssb.no/ikt [3rd Spetember 2006]

Statistisk Sentralbyrå (2005) *Internett-målinga, 3. kvartal 2005* http://www.ssb.no/emner/10/03/inet/ [5th September 2006]

Statistisk Sentralbyrå (2006) *Andel som har tilgang til diverse IKT, etter familietype og husholdningsinntekt. 2. kvartal 2006* http://www.ssb.no/emner/10/03/ikthus/tab-2006-09-14-01.html [18. September 2006]

Statistisk Sentralbyrå (2005) *Nordic Information Society Statistics 2005* http://www.ssb.no/ikt/ict_nord/ [18. September 2006]

Statistisk Sentralbyrå (2006) *IKT i husholdningene 2006* http://www.ssb.no/emner/10/03/ikthus/ [18. September 2006]

Statistisk Sentralbyrå (2005) *Nøkkeltall Informasjonssamfunnet 2004* http://www.ssb.no/emner/10/03/sa_ikt/arkiv/sa71/sa71.pdf [18th October 2006]

Sundvor, Egil (2000) *Forbrukarjournalistikk : framtidas redaksjonelle våpen?* IJ-forlag, Fredrikstad

Telenor *3G-coverage map* http://telenormobil.no/dekninginnland/index.do [18th October 2006]

Telenor *Mobil som modem* http://www.telenor.no/bedrift/produkter/mobil/faq.php?keyword=3g [18th October 2006]

Telenor *Press Releases* http://presse.telenor.no/ [18th October 2006]

Telkom (2005) *Mobile phone market South Africa* http://www.telkom.co.za/portal/page?_pageid=1724,158478&_dad=portal&_schema=PORTAL&p=/pls/portal/docs/page/contents/minisites/ir/markcontex/sub_sahara.html [10th February 2006]

Tumber, Howard (ed) (1999) *News: a reader* Oxford University Press, Oxford UK

United Nations Development Programme, *Human Development Index 2003* http://hdr.undp.org/statistics/data/indic/indic_138_2_2.html [3rd September 2006]

United Nations Development Programme, *Gini Index 2003* http://hdr.undp.org/reports/global/2003/indicator/indic_126_1_1.html [3rd September 2006]

Vodacom (2006) *Company operations and profiles* http://www.vodacom.co.za/about/profile_overview.jsp [1st September 2006]

Vodacom (2006) *3G coverage map* http://www.vodacom.co.za/services/3g/coverage_map.jsp [30th May 2006]

Vodacom (2006) *Media Centre – press releases* http://www.vodacom.co.za/mcprcr.do [1st September 2006]

Vodacom (2006) *Vodacom reaches 20 million subscribers in South Africa* Press release May 10th 2006

Vodafone Group (2006) 10 *million Vodafone live! with 3G customers* Press release 16th March 2006

Webster, Frank (2002) *The Information Society Revisited* in Lievrouw, Leah A. and Livingstone, Sonia (editors) (2002) *Handbook of New Media: Social Shaping and Consequences of ICTs* SAGE Publications, London

Warah, Rasna (2006) Divided *City – Information Poverty in Nairobi's Slums* article published in Carlsson, Ulla & Feilitzen, Cecilia von (editors) Yearbook 2005/2006 *In the service of young people? Studies and reflections on media in the digital age* Nordicom, Göteborg University.

World Wide Worx *Mobile Number Portability in South Africa 2006* http://www.theworx.biz/mnp06a.htm [19. September 2006]

Østbye, Helge & Knapskog, Karl & Helland, Knut & Hillesund Terje (1997) *Metodebok for mediefag* Fagbokforlaget, Bergen (Norway)

Appendix One

1.1 Aftenposten

Total number of articles: 60

Business perspective: 45	**Consumer perspective: 13**	**Political perspective: 0**	**Technology/science perspective: 2**
Geographical proximity: Nat.: 25 /int. cont: 12 /reg. cont: 5 Reg.: 6 /dom. cont: 2 /int. cont: 1 Int.: 14 /dom. cont: 4 /reg. cont: 3 Events/themes/issues: Stock /market info: 12 ICT exhibition: 7 Phone release: 4 Consumer Issue: 11 Political issue: 10 Technology issue: 4 Service release: 6 Digital divide Issue: 0 Financial results: 5 Criteria: Personal focus: 2 Conflict: 1 Major Player: 25 Source cited: Company: 28 Pressrelease/conference:2 Political: 2 Science/ ind. bodies: 1 Media: 12 3G expl./ background information: 8 Sep 04: 1 Dec 04: 1 Jan 05: 1 Feb 05: 4 Nov 05: 1 3G association: TV/Video: 8 News/Weather/Sports: 2 Internet/ e-mail: 3 Videocall: 1 Music: 2 Gaming: 4 Map: 3 Porn: 1 Gambling: 1 Company mentioned: **Norway**	Geographical proximity: Nat.: 12 /int. cont: 2 /reg. cont: 2 Reg.: 1 /dom. cont: /int. cont: Int.: /dom. cont: /reg. cont: Events/themes/issues: Business issue: 1 Service release: 2 Phone release: 2 Test: 3 Sales info/prices: 5 Political issue: 0 ICT Conference: 0 Technology issue: 4 Digital divide Issue: 0 IT-language: 1 Criteria/ focus: Personal focus: 0 Conflict: 0 Major Player: 11 Cultural: 1 Source cited: Company: 6 Press release: 1 Science/ ind. Bodies: 1 Consumers: 2 Media: 2 3G expl./ background information: 2 Oct 04: 1 Nov 04: 1 3G association: TV/Video: 7 News/Weather/Sports: 4 Internet/ e-mail: 2 Videocall: 3 Music: 1 Gaming: Map: 1 Videoconferencing: 1 Company mentioned: **Norway** Telenor: 7 NetCom: 4	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **Regional:** **International**:	Geographical proximity: Nat.: 2 /int. cont: /reg. cont: Reg.: /dom. cont: /int. cont: Int.: /dom. cont: /reg. cont: Events/themes/issues: Consumer issue: 2 Technology issue: 2 Criteria: Source cited: Company: 1 Media: 1 3G explanation/ background information 3G association: Internet/ e-mail: 1 Company mentioned: **Norway** **Regional:** **International**:

Telenor: 14 NetCom: 7 Chess: 1 Sense: 1 Tele 2:1 Other: 13 **Regional**: 8 **International**: Nokia: 12 Samsung: 4 SonyEricsson: 11 Siemens: 3 Motorola: 5 LG: 3 Vodafone: 6 Other: 15	Chess: 1 Tele 2: 1 Other: 3 **Regional: 1** **International**: Nokia: 2 Samsung: 1 SonyEricsson: 3 Motorola: 1		

1.2 Bergens Tidene

Total number of 3G related articles: 9

Business perspective: 4	**Consumer perspective: 1**	**Political perspective: 0**	**Technology/science perspective: 4**
Geographical proximity: Local: 2 National: 2 /int. cont. 1 Events/themes/issues: Stock /market info: 1 Consumer Issue:1 Political issue: 1 Service release: 1 Criteria: Major Player: 3 Time proximity: 1 Source cited: Company: 4 Press release: 1 Political: 1 3G expl./ background information: 1 Mar 05: 1 3G association: Internet/ e-mail: 1 Music: 1 Company mentioned: **Norway** Telenor: 1 NetCom: 2 Chess: 1 Other: 1 **Regional**: **International**:	Geographical proximity: Nat.: 1 Events/themes/issues: Service release: 1 Test: 1 Criteria: Major Player: 1 Source cited: 3G expl./ background information: 1 April 05: 1 3G association: Internet/ e-mail: 1 Company mentioned: **Norway** Telenor: 1 NetCom: 1 **Regional:** **International**:	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **Regional:** **International**:	Geographical proximity: Nat.: 4 /int. cont: 2 Events/themes/issues: Consumer issue: 4 Service release: 1 Criteria: Three of the four articles were commentaries. Written more like an essay than a traditional news paper article. Source cited: Company: 2 Media: 3 3G expl./ background information: 1 Oct 04: 2 Dec 04: 1 3G association: TV/Video: 2 Internet/ e-mail: 2 Videocall: 4 Company mentioned: **Norway** Telenor: 2 **Regional:** **International**:

1.3 Business Day

Total number of 3G related articles: **86**

Business perspective: 80 Geographical proximity: Nat.: 73 /int. cont: 18 /reg. cont: 19 Reg.: 2 /dom. cont: 2 /int. cont: 1 Int.: 5 /dom. cont: 1 Events/themes/issues: Stock /market info: 2 Consumer Issue: 38 Political issue: 6 Technology issue: 11 Service release: 33 Digital divide issue: 7 Criteria: Person focus:1 Conflict: 3 (All political issues) Major Player: 51 Time proximity: 3 Source cited: Company: 67 Political: 2 Science: 2 Media: 3G expl./ background information: 27 June 04: 3 July 04: 2 Aug 04: 1 Sep 04: 3 Oct 04: 1 Nov 04: 4 Dec 04: 3 Feb 05: 3 June 05: 5 July 05: 1 Dec 05: 1 3G association: TV/Video: 16 News/Weather/Sports: 6 Internet/ e-mail: 29 Videocall: 23 Music: 7 Gaming: 5 Banking: 2 Conferencing: 4 Gambling:	**Consumer perspective: 0** Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **South Africa** **Regional:** **International**:	**Political perspective: 1** Geographical proximity: Nat.: 1 Events/themes/issues: Convergence Bill: 1 Criteria: Conflict: 1 Major Player: 1 Source cited: Company: 1 Political: 1 3G explanation/ background information 3G association: Company mentioned: **South Africa** Telkom: 1 SNO: 1 **Regional:** **International**:	**Technology/science perspective: 5** Geographical proximity: Nat.: 1 /int. cont: 1 Int.: 4 /dom. cont: 1 /reg. cont: 1 Events/themes/issues: Business issue: 4 Service release: 2 Consumer issue: 2 Digital divide issue: 1 Criteria: Cultural: 1 Major Player: 4 Source cited: Company: 4 3G expl./ background information: 2 Aug 04: 1 Sep 04: 1 3G association: TV/Video: 1 Internet/ e-mail: 1 Banking: 1 Company mentioned: **South Africa** Vodacom: 1 MTN: 1 **Regional:** **International**: Nokia: 1 Samsung: 1 SonyEricsson: 1 Motorola: 1 LG: 1 Vodafone: 1 Other: 1

Company mentioned: **South Africa** Vodacom: 41 Cell C: 7 MTN: 32 Telkom: 14 SNO: 1 Other: 19 **Regional**: 3 **International**: Nokia: 3 Samsung: 3 SonyEricsson: 1 Siemens: 4 Motorola: 4 Vodafone: 5			

1.4 Business Report

Total number of 3G related articles: **46**

Business perspective: 42	**Consumer perspective: 1**	**Political perspective: 1**	**Technology/science perspective: 2**
Geographical proximity: Nat.: 22 /int. cont: 6 /reg. cont: 11 Reg.: 2 /dom. cont: 1 /int. cont: 2 Int.: 18 /dom. cont: 1 /reg. cont: 2 Events/themes/issues: Stock /market info: 18 ICT exhibition: 1 Phone release: 4 Consumer Issue: 8 Political issue: 4 Technology issue: 2 Service release: 1 Digital divide Issue: 3 Financial results: 8 Criteria: Personal focus:1 Conflict: 1 Major Player: 37 Source cited: Company: 34 Political: 2 3G expl./ background information: 15 June 04: 4 July 04: 2 Nov 04: 1 Dec 04: 2 Feb 05: 1 May 05: 1 June 05: 2 July 05: 2 3G association: TV/Video: 10 News/Weather/Sports: 2 Internet/ e-mail: 12 Videocall: 7 Music: 5 Gaming: 1 Banking: 1 Company mentioned: **South Africa** Vodacom: 20 Cell C: 4 MTN: 15	Geographical proximity: Int.: 1 Events/themes/issues: Service release: 1 Criteria: Major Player: 1 Source cited: Company: 1 3G expl./ background information: 0 3G association: TV/Video: 1 Company mentioned: **South Africa** **Regional:** **International**: Vodafone: 1	Geographical proximity: Nat.: 1 Events/themes/issues: Technology regulation: 1 Criteria: Major Player: 1 Source cited: Political: 1 3G expl./ background information: 0 3G association: Company mentioned: **South Africa** Vodacom: 1 Cell C: 1 MTN: 1 Telkom: 1 Other: 1 **Regional:** **International**:	Geographical proximity: Reg.: 1 /int. cont: 1 Int.: 1 Events/themes/issues: Consumer issue: 1 Digital divide issue: 1 Criteria: Major Player: 1 Source cited: Company: 2 Science: 1 3G explanation/ background information 3G association: TV/Video: 1 Company mentioned: **South Africa** **Regional:** **International**: SonyEricsson: 1 Other: 1

Telkom: 12 SNO: 3 Other: 11 **Regional**: 1 **International**: Nokia: 12 Samsung: 5 SonyEricsson: 8 Siemens: 4 Motorola: 8 LG: 2 Vodafone: 13 Other: 6			

1.5 Dagbladet

Total number of 3G related articles: **22**

Business perspective: 2	**Consumer perspective: 17**	**Political perspective: 0**	**Technology/science perspective: 3**
Geographical proximity: Nat.: 1 /int. cont: /reg. cont: Reg.: /dom. cont: /int. cont: Int.: 1 /dom. cont: /reg. cont: Events/themes/issues: ICT exhibition: 1 Consumer issue: 1 Short paragraph: 1 Criteria/focus: Source cited: Independent body: 1 3G explanation/ background information: 3G association: Company mentioned: **Norway** Telenor: 1 NetCom: 1 **Regional**: **International**:	Geographical proximity: Nat.: 16 /int. cont: /reg. cont: 5 Reg.: /dom. cont: /int. cont: Int.: 1 /dom. cont: 1 /reg. cont: Events/themes/issues: Business issue: 1 Service release: 6 Phone release + exclusively: 4 + 7 Test: 5 Sales info: 7 ICT Conference: 1 Technology issue: 2 Consumer guide: 1 Criteria/focus: Time proximity: 1 Major Player: 3 Source cited: Company: 4 Media: 4 Consumers: 2 3G expl./ background information: 6 Oct 04: 1 Dec 04: 1 Jan 05: 3 Nov 05: 1 3G association: TV/Video: 5 News/Weather/Sports: 3 Internet/ e-mail: 6 Videocall: 9 Music: 3 Gaming: 1 Map: 1 Dating: 1 Pornography: 2 Mobile virus: 1 Company mentioned: **Norway** Telenor: 5 NetCom: 4 Chess: 1 Sense: 1	Geographical proximity: Events/themes/issues: Criteria/focus: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **Regional:** **International**:	Geographical proximity: Nat.: 2 None: 1 Events/themes/issues: Technology language: 3 Criteria/focus: Cultural: 3 Source cited: Company: 1 3G expl./ background information: 3 Oct 04: 1 Jan 05: 1 Feb 05: 1 3G association: TV/Video: 1 Internet/ e-mail: 1 Videocall: 1 Videoconference: 1 Company mentioned: **Norway** **Regional:** **International**:

	Other: 1 **Regional: 3** **International**: Nokia: 9 Samsung: 5 SonyEricsson: 4 Siemens: 3 Motorola: 5 Vodafone: 1 Other: 1		

1.6 Dagens Næringsliv

Total number of 3G related articles: 64

Business perspective: 57	**Consumer perspective: 4**	**Political perspective: 2**	**Technology/science perspective: 1**
Geographical proximity: Nat. 30 /int. cont: 13 /reg. cont: 10 Reg.: 9 /dom. cont: 6 /int. cont: Int.: 18 /dom. cont: 5 /reg. cont: 4 Events/themes/issues: Stock /market info: 10 ICT exhibition: 2 Phone release: 4 Consumer Issue: 6 Political issue: 9 Technology issue: 5 Service release: 7 Financial performance/ interim results: 6 Press conference: 1 Criteria: Personal focus: 8 Conflict: 5 Major Player: 40 Source cited: Company: 50 Press release: Political: 4 Science: Media: 5 Court: 1 3G expl./ background information: 6 June 04: 2 Aug 04: 1 Dec 04: 1 May 05: 1 Oct 05: 1 3G association: TV/Video: 8 News/Weather/Sports: 3 Internet/ e-mail: 3 Videocall: 2 Music: 5 Videoconference: 1 Company mentioned: **Norway** Telenor: 20 NetCom: 12	Geographical proximity: Nat.: 3 /int. cont: /reg. cont: Reg.: 0 /dom. cont: /int. cont: Int.: 1 /dom. cont: /reg. cont: Events: Business issue: Service release: 2 Phone release: 2 Test: 2 Technology issue: 1 Criteria: Major Player: 3 Source cited: Company: 1 3G expl./ background information: 0 3G association: News/Weather/Sports: 1 Internet/ e-mail: 1 Company mentioned: **Norway** Telenor: 1 Other:1 **Regional:** 0 **International**: Nokia: 2	Geographical proximity: Nat.: 0 /int. cont: /reg. cont: Reg.:1 /dom. cont: /int. cont: Int.: 1 /dom. cont: /reg. cont: Events: Business issue: 2 Technology issue: 2 Criteria: Major Player: 2 Source cited: Company: 2 Political: 2 Media: 1 3G expl./ background information: 1 July 05: 1 3G association: TV/Video: 1 Company mentioned: **Norway:** 0 **Regional:** 1 **International**: Nokia: 1 Samsung: 1 Motorola: 1 LG: 1 Vodafone: 1 Other: 1	Geographical proximity: Nat.: 0 /int. cont: /reg. cont: Reg.:0 /dom. cont: /int. cont: Int.:1 /dom. cont: /reg. cont: Events: Business issue: 1 : Test: 1 Consumer issue: 1 Criteria: 0 Source cited: Company: 1 Media: 1 3G expl./ background information: 1 Oct 04: 1 3G association: News/Weather/Sports: 1 Internet/ e-mail: 1 Videocall: 1 Company mentioned: **Norway:** 0 **Regional: 0** **International**: Nokia: 1 Other: 1

Sense: 1 Other: 9 **Regional**: 11 **International**: Nokia: 12 Samsung: 5 SonyEricsson: 13 Siemens: 2 Motorola: 4 LG: 1 Vodafone: 5 Other: 9			

1.7 Dagsavisen

Total number of 3G related articles: 3

Business perspective: 1 Geographical proximity: Nat.: 1 /reg. cont: 1 Events/themes/issues: Political issue: 1 Criteria: Major Player: 1 Source cited: 3G explanation/ background information: 3G association: Company mentioned: **Norway** Telenor: 1 NetCom: 1 **Regional**: **International**:	**Consumer perspective: 2** Geographical proximity: Nat.: 2 /int. cont: 2 Events/themes/issues: Service release: 2 Criteria: Major Player: 2 Source cited: Company: 2 3G expl./ background information: 2 Nov 04: 1 Feb 05: 1 3G association: TV/Video: 2 News/Weather/Sports: 2 Internet/ e-mail: 2 Videocall: 1 Music: 1 Gaming: 1 Map: 1 Company mentioned: **Norway** Telenor: 2 NetCom: 1 **Regional:** **International**: Vodafone: 1 Other: 1	**Political perspective: 0** Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **Regional:** **International**:	**Technology/science perspective: 0** Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **Norway** **Regional:** **International**:

1.8 Cape Argus

Total number of 3G related articles: **16**

Business perspective: 10	**Consumer perspective: 6**	**Political perspective: 0**	**Technology/science perspective: 0**
Geographical proximity: Local: 0 Nat.: 4 /reg. cont: Reg.: 2 /dom. cont: 2 /int. cont: 2 Int.: 4 /dom. cont: 1 Events/themes/issues: ICT exhibition: 3 Consumer Issue: 6 Political issue: 1 Technology issue: 1 Service release: 1 Digital divide Issue: 1 Criteria: Major Player: 9 Source cited: Company: 6 3G explanation/ background information: 3G association: TV/Video: 5 News/Weather/Sports: 3 Internet/ e-mail: 3 Videocall: 3 Music: 2 Gaming: 2 Company mentioned: **South Africa** Vodacom: 6 Cell C: 1 MTN: 3 Other: 1 **Regional**: **International**: Nokia: 4 Samsung: 3 SonyEricsson: 4 Siemens: 2 Motorola: 2 LG:1 Vodafone: 3 Other: 3	Geographical proximity: Nat.: 5 /int. cont: 4 /reg. cont: 2 Int.: 1 Events/themes/issues: Service release: 3 Phone release: 2 Test: 1 Sales info: 1 Political issue: 1 ICT exhibition: 2 Digital divide Issue: 1 Criteria: Major Player: 6 Source cited: Company: 5 3G expl./ background information: 4 June 04: 1 Nov 04: 1 Sep 05: 1 Dec 05: 1 3G association: TV/Video: 4 News/Weather/Sports: 2 Internet/ e-mail: 3 Videocall: 2 Music: 4 Gaming: 1 Conference: 1 Company mentioned: **South Africa** Vodacom: 4 Cell C: 1 MTN: 5 Other: **Regional:** **International**: Nokia: 3 Samsung: 2 SonyEricsson: 3 Siemens: 1 Motorola: 2 Other: 1	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:

1.9 City Press

Total number of 3G related articles: 13

Business perspective: 13	**Consumer perspective: 0**	**Political perspective: 0**	**Technology/science perspective: 0**
Geographical proximity: Nat.: 7 /int. cont: 5 /reg. cont: 1 Reg.: 2 /dom. cont: 1 /int. cont: 1 Int.: 4 Events/themes/issues: Stock /market info: 1 Consumer Issue: 4 Political issue: 2 Service release: 7 Digital divide issue: 1 Criteria: Major Player: 8 Source cited: Company: 11 Press release: 4 3G expl./ background information: 8 June 04: 1 July 04: 2 Dec 04: 1 Feb 05: 1 June 05: 1 Oct 05: 1 Dec 05: 1 3G association: TV/Video: 5 News/Weather/Sports: 2 Internet/ e-mail: 2 Videocall: 7 Music: 2 Map: 1 Company mentioned: **South Africa** Vodacom: 6 Cell C: 2 MTN: 4 Telkom: 1 **Regional**: 3 **International**: Nokia: 3 SonyEricsson: 2 Vodafone: 4 Other: 1	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:	Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:

1.10 Sunday Times

Number of 3G related articles: **18**

Business perspective: 12	**Consumer perspective: 4**	**Political perspective: 0**	**Technology/science perspective: 2**
Geographical proximity: Nat.: 11 /int. cont: 5 /reg. cont: 5 Int.: 1 /dom. cont: 1 /reg. cont: 1 Events/themes/issues: Stock /market info: 1 Phone release: 1 Consumer Issue: 2 Political issue: 2 Technology issue: 1 Service release: 1 Digital divide Issue: 1 Financial results: 4 Paid trip to Samsung: 1 Criteria/focus: Person focus: 1 Conflict: 3 Major Player: 9 Source cited: Company: 9 3G expl./ background information: 0 3G association: TV/Video: News/Weather/Sports: 1 Internet/ e-mail: 3 Videocall: 2 Music: 1 Symbolic/status: 1 Company mentioned: **South Africa** Vodacom: 6 Cell C: 3 MTN: 6 Telkom: 1 SNO: 1 Other: 2 **Regional**: 0 **International**: Nokia: 2 Samsung: 2 SonyEricsson: 1 Motorola: 2 Vodafone: 2	Geographical proximity: Nat.: 4 /int. cont: 1 Events/themes/issues: Business issue: 1 Service release: 1 Phone release: 1 Sales info: 1 Technology issue: 2 Digital divide issue: 1 Criteria/focus: Major Player: 2 Source cited: Company: 2 3G expl./ background information: 1 Nov 04: 1 3G association: TV/Video: 2 News/Weather/Sports: 1 Internet/ e-mail: 1 Videocall: 1 Conferencing: 1 Symbolic/status: 1 Company mentioned: **South Africa** Other: 2 **Regional:** **International**: Nokia: 2 Samsung: 1 Other: 1	Geographical proximity: Events/themes/issues: Criteria/focus: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:	Geographical proximity: Nat.: 1 /reg. cont: 1 Int.: 1 /dom. cont: 1 /reg. cont: 1 Events/themes/issues: Business issue: 1 Political issue: 1 Consumer issue: 1 Paid trip Samsung: 1 Criteria/focus: Major Player: 2 Source cited: Company: 2 3G explanation/ background information 3G association: Internet/ e-mail: 1 Company mentioned: **South Africa** Vodacom: 1 Telkom: 1 Other: 1 **Regional:** **International**: Samsung: 1 Motorola: 1

1.11 The Mercury

Total number of 3G related articles: **4**

Business perspective: 2 Geographical proximity: Nat.: 1 Int.: 1 /dom. cont: 1 /reg. cont: 1 Events/themes/issues: Phone release: 1 Consumer Issue: 2 Political issue: 2 Business portray: 1 Criteria: Major Player: 1 Source cited: Company: 2 Press release: 1 Political: 2 3G expl./ background information: 2 May 05: 1 July 05: 1 3G association: TV/Video: 1 Internet/ e-mail: 2 Videocall: 1 Company mentioned: **South Africa** Vodacom: 1 Cell C: 2 MTN: 2 Telkom: 1 **Regional**: **International**: Samsung: 1	**Consumer perspective: 1** Geographical proximity: Nat.: 1 /int. cont: 1 Events/themes/issues: Phone release: 1 Sales info: 1 Criteria: Major Player: 1 Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**: Nokia: 1	**Political perspective: 0** Geographical proximity: Events/themes/issues: Criteria: Source cited: 3G explanation/ background information 3G association: Company mentioned: **South Africa** **Regional:** **International**:	**Technology/science perspective: 1** Geographical proximity: Reg.: 1 /dom. cont: 1 Events/themes/issues: Service release: 1 Consumer issue: 1 Digital divide Issue: 1 Criteria: Cultural: 1 Source cited: Company: 1 NGO: 1 3G expl./ background information: 1 Mar 05: 1 3G association: TV/Video: 1 News/Weather/Sports: 1 Internet/ e-mail: 1 Music: 1 Company mentioned: **South Africa** Vodacom: 1 MTN: 1 **Regional:** **International**:

Appendix Two

2.1 Norway

Business perspective: 109	**Consumer perspective: 37**	**Political perspective: 2***	**Technology/science perspective: 10**
Geographical proximity: Nat.: 59 /int. cont: 26 /reg. cont: 16 Reg.: 15 /dom. cont: 8 /int. cont: 1 Int.: 33 /dom. cont: 9 /reg. cont: 7 Local: 2 Events/themes/issues: Stock /market info: 23 ICT exhibition: 10 Phone release: 8 Consumer Issue: 19 Political issue: 20 Technology issue: 9 Service release: 14 Digital divide Issue: 0 Financial results: 11 Press conference: 1 Criteria/focus: Person focus:10 Conflict: 6 Major Player: 69 Source cited: Company: 81 Press release: 3 Political: 7 Science/independent body/court: 3 Other media: 17 3G expl./ background information: 15 June 04: 2 Aug 04: 1 Sep 04: 1 Dec 04: 2 Jan 05: 1 Feb 05:4 Mar 05: 1 May 05: 1 Oct 05: 1 Nov 05: 1 3G association: TV/Video: 16 News/Weather/Sports: 5 Internet/ e-mail: 7 Videocall: 3	Geographical proximity: Nat.:34 /int. cont: 4 /reg. cont: 7 Reg.: 1 Int.: 2 /dom. cont: 1 Events/themes/issues: Business issue: 2 Service release: 13 Phone release: 15 Test/guide: 12 Sales info: 12 ICT Conference: 1 Technology issue: 7 Techno-language: 1 Criteria/focus: Major Player: 19 Source cited: Company: 13 Press release: 1 Science/Independent bodies: 1 Media: 6 Consumers: 4 3G expl./ background information: 11 Oct 04: 2 Nov 04: 2 Dec 04:1 Jan 05: 3 Feb 05: 1 April 05: 1 Nov 05: 1 3G association: TV/Video: 14 News/Weather/Sports: 12 Internet/ e-mail: 12 Videocall: 13 Music: 5 Gaming: 2 Map: 3 Videoconference: 1 Pornography: 2 Dating: 1 Mobile viruses: 1 Company mentioned: **Norway**	Geographical proximity: Reg.: 1 Int.: 1 Events/themes/issues: Business issue: 2 Technology issue: 2 Criteria/focus: Major Player: 2 Source cited: Company: 2 Political: 2 Media: 1 3G expl./ background information: 1 July 05: 1 3G association: TV/Video: 1 Company mentioned: **Norway** **Regional: 1** **International**: Nokia: 1 Samsung: 1 Motorola: 1 LG: 1 Vodafone: 1 Other: 1 *Note that both articles were published in Dagens Næringsliv.	Geographical proximity: Nat.: 8 /int. cont: 2 Int.: 1 N/A: 1 Events/themes/issues: Business issue: 1 Service release: 1 Test: 1 Consumer issue: 7 Techno-language: 3 Criteria/focus: Cultural: 3 Source cited: Company: 5 Media: 5 3G expl./ background information: 7 Oct 04: 4 Dec 04: 1 Jan 05: 1 Feb 05: 1 3G association: TV/Video: 3 News/Weather/Sports: 1 Internet/ e-mail: 5 Videocall: 6 Videoconferencing: 1 Company mentioned: **Norway** Telenor: 2 **Regional:** **International**: Nokia: 1 Other: 1

Music: 8 Gaming: 4 Map: 3 Videoconference: 1 Pornography: 1 Gambling: 1 <u>Company mentioned:</u> **Norway** Telenor: 37 NetCom: 23 Chess: 2 Sense: 2 Tele 2: 1 Other: 23 **Regional**: 19 **International**: Nokia: 24 Samsung: 9 Ericsson/ SonyEricsson: 24 Siemens: 5 Motorola: 9 LG: 4 Vodafone: 11 Other: 24	Telenor: 16 NetCom: 10 Chess: 2 Sense: 1 Tele 2: 1 Other: 5 **Regional: 4** **International**: Nokia: 13 Samsung: 6 SonyEricsson: 7 Siemens:3 Motorola: 6 Vodafone: 2 Other: 2		

2.2 South Africa

Business perspective: 159	**Consumer perspective: 12**	**Political perspective: 2**	**Technology/science perspective: 10**
Geographical proximity: Nat.: 122 /int. cont: 34 /reg. cont: 37 Reg.:8 /dom. cont: 6 /int. cont: 6 Int.:33 /dom. cont: 5 /reg. cont: 4 Events/themes/issues: Stock /market info: 22 ICT exhibition: 4 Phone release: 6 Consumer Issue: 60 Political issue: 17 Technology issue: 15 Service release: 43 Digital divide Issue: 13 Financial results: 12 Criteria/focus: Person focus: 3 Conflict: 7 Major Player: 115 Source cited: Company: 129 Press release: 5 Political: 6 Science/Independent body: 2 3G expl./ background information: 52 June 04: 8 July 04: 6 Aug 04: 1 Sep 04: 3 Oct 04: 1 Nov 04: 5 Dec 04: 6 Feb 05: 5 May 05: 2 June 05: 8 July 05: 4 Oct 05: 1 Dec 05: 2 3G association: TV/Video: 37 News/Weather/Sports: 14 Internet/ e-mail: 50 Videocall: 43 Music: 17 Gaming: 8 Map: 1 Banking: 3	Geographical proximity: Nat.: 10 /int. cont: 6 /reg. cont: 2 Int.: 2 Events/themes/issues: Business issue: 1 Service release: 5 Phone release: 4 Test: 1 (the author recommends… Cape Argus article.) Sales info: 3 Political issue: 1 ICT Conference: 2 Technology issue: 2 Digital divide Issue: 2 Criteria/focus: Person focus: 10 Source cited: Company: 8 3G expl./ background information: 5 June 04: 1 Nov 04: 2 Sep 05: 1 Dec 05: 1 3G association: TV/Video: 7 News/Weather/Sports: 3 Internet/ e-mail: 4 Videocall: 3 Music: 4 Gaming: 1 Conferencing: 2 Company mentioned: **South Africa:** Vodacom: 5 MTN: 5 Cell C: 1 Other: **2** **Regional:** **International**: Nokia: 6 Samsung: 3 SonyEricsson: 3 Siemens: 1 Motorola: 2 Vodafone: 1 Other: 2	Geographical proximity: Nat.: 2 Events/themes/issues: Technology regulation: 1 Convergence Bill: 1 Criteria/focus: Conflict: 1 Major Player: 2 Source cited: Company: 1 Political: 2 3G explanation/ background information: N/A 3G association: N/A Company mentioned: **South Africa:** Vodacom: 1 MTN: 1 Cell C: 1 Telkom: 2 SNO: 1 Other: 1 **Regional:** N/A **International**: N/A	Geographical proximity: Nat.: 2 /int. cont: 1 /reg. cont: 1 Reg.: 2 /dom. cont: 1 /int. cont: 1 Int.: 6 /dom. cont: 2 /reg. cont: 2 Events/themes/issues: Business issue: 5 Service release: 3 Political issue: 1 Consumer issue: 5 Digital divide Issue: 3 Paid trip to Samsung Plant: 1 Criteria/focus: Cultural: 2 Major Player: 7 Source cited: Company: 9 Science/ Independent body: 1 3G expl./ background information: 3 Aug 04: 1 Sep 04: 1 Mar 05: 1 3G association: TV/Video: 3 News/Weather/Sports: 1 Internet/ e-mail: 3 Music: 1 Banking: 1 Company mentioned: **South Africa:** Vodacom: 3 MTN: 2 Telkom: 1 Other: **1** **Regional:** **International**: Nokia: 1 Samsung:2 SonyEricsson: 2 Motorola: 2 LG: 1 Vodafone: 1 Other: 2

Conferencing; 4 <u>Company mentioned:</u> **South Africa:** Vodacom: 80 MTN: 62 Cell C: 19 Telkom: 29 SNO: 5 Other: 33 **Regional**: 7 **International**: Nokia: 24 Samsung: 14 SonyEricsson: 16 Siemens: 10 Motorola: 16 LG: 3 Vodafone: 27 Other: 10			